



Research Alive

Issue 11 – Oct. 2001 Newsletter



Mission

The Johnstone Centre's mission is to assist in conserving and restoring environmental quality in protected and human-dominated landscapes. We will seek to do this within a systems-based framework, using inter-disciplinary approaches.

Message from the Director

There is nothing like peer-review of activities to focus attention on how successful research groups are in delivering effective outcomes. Recently, as part of the quality assurance procedures for research centres within Charles Sturt University, the Johnstone Centre went through a re-accreditation review. The external referees for our re-accreditation were Dr Steward Pickett of the Institute of Ecosystem Studies in New York, Professor Hugh Possingham of the University of Queensland, Dr Sue Briggs of NSW National Parks and Wildlife Service and Professor Craig Pearson of the Bureau of Rural Sciences. Based on their very positive assessments of our achievements the Centre was accredited for a further three years of operation.

The Centre can be very proud of its achievements over the last four years. We published 350 peer-reviewed books, chapters, journal papers and conference proceedings, attracted \$4.8M in funding and are in the process of training 34 postgraduate research students. However, it is our connection to stakeholders and the impact of our research on community groups, government agencies and other researchers that stands out. We continue to influence a variety of decision-making on the prudent management of natural resources.

Recently I was invited to attend a small conference held by Land and Water Australia in Dubbo on managing agricultural lands for better water-use efficiencies. This was not the dry scientific meeting I expected, but was a quite inspiring day, owing mainly to presentations from some leading farmers and the discussions that arose from their talks. Quite simply, some landowners are leading the way in re-thinking sustainable agriculture. For instance, Bruce Maynard from Narromine described his 1500ha property as a grassland woodland complex that he managed so that he could get as close as possible to nature while producing an economic return. The key to Bruce's operation was switching from a

focus on production to one of profitability. Bruce claimed that owing to the decreasing terms of trade for beef his family had had to make a 100% shift in their approach to farming, and they now aimed to manage grassland biodiversity with low inputs. Listening to talks like Bruce's made me think that as academics, we also need to reflect on how we go about our research. The re-accreditation process allowed us to collect quantitative information on what we have achieved. While the Johnstone Centre has done an excellent job in a traditional academic sense, I wonder whether we, and most other researchers in natural resource management, are helping to lead the debate about conservation or whether we are just working around the edges? A challenge for all of us is to be more effective in providing research-based advice that really makes a difference.

Recent Grants & Projects

Livestock management and the assessment of management practices in riparian ecosystems

Alistar Robertson, Amy Jansen, Ian Lunt and Allan Curtis have all begun working on this new project that is funded by Land and Water Australia and State Forests of New South Wales. This is part of the larger consortium project on riparian ecology managed by the Johnstone Centre and the Australia Centre for Tropical Freshwater Research at James Cook University that forms part of the National Riparian Lands Program Phase II managed by Land and Water Australia.

The project is focussed on investigating the relationships between livestock management practices and the ecology of riparian habitats in southern NSW and parts of Victoria. The team will be using rapid appraisal techniques at landscape scales, controlled grazing experiments at the paddock and regional scales and plot scale-experiments at particular sites to investigate these relationships. The initial focus of the work is on the Murrumbidgee and Murray floodplains, but Alistar will be investigating possible field sites in Gippsland with a team from Land and Water Australia in October. Allan and Alistar have done some work on landowners' adoption of best practice management of river frontages in the Goulburn Broken catchment and hope to extend this work to other catchments.

Expert Witness – Githabul Peoples' Native Title Claim

CSU/Johnstone Centre have recently signed a contract with the New South Wales Aboriginal Land Council (NSWALC) for Dr. Jim Birkhead to act as an



anthropological research consultant and expert witness to the Federal Court in this matter. This is a continuation of his previous research conducted with the Githabul people since 1996, under a previous contract. A new contract was negotiated (a fairly lengthy process) because of changes to the Native Title Act in 1998 and a reprioritising of the claim to serve as a test case for the Federal Court with a consequent higher level of research evidence this now requires.

The Githabul claim area centres on Muli Muli, near Woodenbong, north of Kyogle, (in the vicinity of Nimbin, Casino, and Lismore) and incorporates a number of national parks and state forests in both New South Wales and southern Queensland, including Mt. Barney, Mt. Lindsey, and Tooloom National Parks. Members of the claimant group also live in Redfern, Coffs Harbour, Penrith, Casino, and Toowoomba.

NSWALC and lawyers Chalk and Fitzgerald of Sydney manage the native title claim. Dr. Birckhead will work with fellow anthropologist Ray Wood to produce an anthropological report according to instructions from the lawyers to ascertain the Githabul physical, historical, and spiritual connection to country and how this has been maintained since colonisation and is expressed today in accordance with their 'traditional laws and customs'. Both ethnographic field and archival research will be undertaken to collect evidence to meet the federal court deadline of March 2002, and to form the basis for testimony in the Federal Court. Dr. Birckhead and Mr. Wood will work also with historians, an archaeologist, a linguist, a genealogist, a musicologist, and a number of lawyers to provide a more complete picture of the Githabul people and their claim to country under the amended Native Title Act of 1998.

Jim Birckhead (with others) has recently written about the role of indigenous people and the environment (see Birckhead, J., Collins, J. Sakulas, H. & Bauer, J. 2000/01, *Caring for country today: towards an ecopolitics of sustainable land management regimes*, in J.L Craig, N. Mitchell, & D.A. Saunders, eds., *Nature Conservation 5: Nature Conservation in Production Environments: Managing the Matrix*, Surrey Beatty & Sons, Chipping Norton, pp. 594-605). He has written also about the complexities and practicalities of doing research on indigenous issues and the environment for a special issue of an American journal on 'Practicing Anthropology in Australia' (see Birckhead, J., 2001, *Monitored lives: Writing indigenous land management and the state*, Part One, *Practicing Anthropology*, Vol. 23, No. 1, Winter, pp. 32-35). CSU PhD. student, Julie Collins contributed as well (see Collins, J. 2001, *Monitored lives: Writing indigenous land management and the state*, Part Two, *Practicing Anthropology*, Vol. 23, No. 1, Winter, pp. 36-37). More generally, Jim Birckhead has in press a chapter dealing with the methodological and philosophical issues of researching and writing about belief systems and spirituality (see Birckhead, J. in press, 2002, 'There's power in the blood': Writing serpent handling as everyday

life, in J. V. Spickard, J. S. Landres, & M. McGuire, eds., *Personal Knowledge and Beyond: Reshaping the Ethnography of Religion*, New York University Press.

Understanding landholder management of river frontages

Allan Curtis and Alistar Robertson recently completed a study exploring landholder adoption of practices expected to improve the management of riparian areas in the Goulburn Broken Catchment (GBC) in Victoria. A mail survey was the principal data collection instrument. This research was part of a larger project undertaken by the Goulburn Broken Catchment Management Authority (GBCMA) and funded by Land and Water Australia to assess the impacts of grazing on the condition of riparian zones. Research findings highlighted the limited adoption of most current recommended practices (CRP) and the extent that GBCMA project participants represented a small, atypical set of river frontage owners. Higher adoption of current recommended practices (in particular fencing) was correlated with: greater knowledge of river frontage function and factors affecting river frontage condition; higher importance attached to environmental and social values; non-farming occupations; and higher confidence in the efficacy of current recommended practices. A majority of the respondents were non-farmers by occupation and these landholders owned about half of all river frontages. Many of the non-farmers owned very small properties that resembled "beach" properties. These findings have important implications for managers and scientists, including the need to reassess the efficacy of CRP related to fencing, stocking rates and off-stream watering. There also needs to be some reassessment of approaches to community education, ensuring that appeals to adopt CRP embrace the full range of values landholders attach to their frontages. Appeals definitely need to move beyond a narrow focus on enhancing agricultural production. Only one third of respondents had any on-property profit and survey data suggested that economic concerns were an important factor limiting the adoption of CRP, particularly amongst farmers. There was considerable interest in taking up grant schemes operated by the GBCMA that provided for higher levels of cost sharing by government.

Research findings have been published as a refereed conference paper and a Johnstone Centre report that is available from Allan Curtis.

The effect of different management regimes on aquatic consumers and food sources in rice agroecosystems –

Andrea Wilson -

Despite the recognised importance of biodiversity to agricultural sustainability, and the huge investment in pesticides to control rice bay fauna, little is known of the macroinvertebrate communities they contain.

This project aims to characterise the diversity of floodwater fauna within rice crops cultivated under three different



management regimes. The comparisons between conventional aerial, conventional direct-drill and organic crops have been given a temporal dimension by sampling throughout the growing season. In addition to compositional biodiversity assessments like species richness, the inclusion of stable isotope analysis will endeavour to identify functional differences that exist between these systems.

Preliminary results show that differences between these environments are greatest at the beginning of the growing season, with organic sites having significantly higher species richness. However, in terms of total abundance the conventional crops often contain more individuals of pest species such as the chironomid larvae. This is of interest because the insecticides applied to conventional fields are specifically targeted to control this pest.

Waterfowl abundance and impact modelling in the rice-growing regions of southern NSW - Dr. David Roshier

Waterfowl damage to rice crops is a significant problem for the rice industry in the Murray-Darling Basin. Entire bays of rice may be lost to ducks, with much of the damage occurring at night. This places a financial and social burden on individual growers and is difficult to manage because its timing and magnitude are difficult to predict. Previous studies in the rice-growing regions of NSW have suggested that the impacts of waterfowl on rice production vary within the region and that this variation is related to the spatial distribution of rice bays, their proximity to other habitats and the timing and method of sowing. Rice growers report 'good' and 'bad' years in terms of duck damage, with the severe years anecdotally associated with dry years in Australia's arid interior, or with years of high local rainfall with subsequent waterfowl breeding. These observations suggest a complex interaction of fine and broad scale factors determining local abundance of waterfowl. Local changes in waterfowl abundance in the rice growing regions are likely to be a function of population processes operating at multiple spatial scales. The most significant of these are likely to be regional changes in habitat availability mitigated by agricultural practices and flooding or drought outside the region that impact on the distribution and abundance of the broader population. These processes will affect waterfowl numbers on different time scales and will be operating concurrently. For rice growers the lack of knowledge of the factors that influence local abundance represents a major impediment to management of the problem of crop predation. For wildlife managers the lack of information is an impediment to ensuring that the impact of pest mitigation, predominantly shooting, does not affect the long-term survival of species or populations. Currently about 200,000 waterfowl are shot each year in rice growing areas of New South Wales.

Dr. Roshier has been contracted by the Game Bird management Committee to use available data in order to model changes in waterfowl abundance in the rice-growing regions of southern NSW. These data include duck shooter

returns, annual surveys of waterbird abundance, and digital maps of wetland and rice bay distribution.

The objectives of the project are:

- Review published and stakeholder knowledge of location and timing of breeding events and changes in the distribution and relative abundance of pest species of waterfowl in the rice growing regions.
- Investigate relationships between shooter returns (1995-2000) and wetland and rice bay area, rice production and climatic factors at local scales.
- Determine relationships between shooters returns and the NSW NPWS aerial survey data for the rice-growing region of southern NSW.
- Model relationships between waterfowl abundance in the rice growing regions and habitat availability at the landscape scale.

Funding is being sought to attach satellite transmitters to grey teal in order to model their movements and use of natural wetlands and rice bays.

Assessment of Environmental Flows for the Murrumbidgee River: Developing biological indicators for assessing river flow management - Robyn Watts & Darren Ryder

Rivers and their floodplains have been altered through diversion, damming and development of floodplains. In 1994 the Council of Australian Governments released a document on Water Principles and in response to this many of the states of Australia introduced water reforms. Since 1998 several regulated rivers in NSW (including the Murrumbidgee River) have received environmental flows. A three year project on developing indicators for the assessment of environmental flows in the Murrumbidgee River was recently completed by Dr Robyn Watts (Project Leader), Dr Darren Ryder (Post-doctoral Fellow), Ms Laurie Chisholm (now at the University of Wollongong) and Ms Bronwyn Lowe (PhD student) from the Wagga Wagga campus of Charles Sturt University. This project was funded by the NSW Water Management Fund and was designed to assist the NSW Department of Land and Water Conservation develop a biological monitoring program to assess the ecological responses to changed flow management. Although there are already many biological indicators that are being used to assess river 'health', there was a need for this project as there was insufficient information on how biological indicators respond to aspects of flow regime.

This project comprised field surveys and field and laboratory experiments throughout the upper, mid and lower Murrumbidgee Catchment. Biological indicator responses to different flow regimes were assessed using three approaches:

1. Field surveys were undertaken at river reaches having different flow regimes. The relationship between biological indicators and flow regimes was examined at different spatial and temporal scales



2. Changes in water level experienced under different flow regimes were simulated in field experiments
3. Different flooding scenarios that would be experienced under different flow regimes were simulated in controlled experiments.

Instream indicators (Biofilms and aquatic macroinvertebrates)

This study showed that biofilm and macroinvertebrate indicators are highly scale dependent. The relationship between biofilm attributes and hydrological variables was most predictable at small spatial scales (reach scale) and short temporal scales (weeks). The relationship between macroinvertebrate attributes and hydrological variables was most predictable at a larger spatial scale (geomorphic zone). A field experiment examining biofilm metabolism under three simulated inundation/desiccation flow regimes showed that the frequency of wetting and drying significantly affect biofilm primary productivity.

Riparian indicators (riverbank understory vegetation, river red gums)

A field survey showed the distribution and abundance of riverbank plants differed between river reaches having different flow regimes. Field experiments found prolonged inundation in combination with sediment deposition reduced survival and growth of riverbank plants. A study of the spectral responses of River Red Gums subjected to three controlled inundation regimes showed that remote sensing technique can be used to detect different levels of moisture stress in Red Gum leaves. The study also showed that natural rainfall was insufficient to maintain good canopy condition and that changes in the spectral response of river red gum are detectable within two weeks of flooding.

Each of the biological indicators assessed in this study responded to flow regime at different spatial and temporal scales. On the basis of this research it will be possible to establish a monitoring program to examine both the short term and long term response of the ecological community to environmental flows. The results from this study are contributing to the development of flow rules in the Murrumbidgee River and will be incorporated into the Department of Land and Water Conservation's environmental flows monitoring program.

Spatial data mining with intelligent agents for E-commerce

Professor David Green, School of Environmental and Information Sciences is one of the chief investigators in a group that has been successful in securing an APAI grant of \$67,635 to undertake research into the project.

Montague Island penguins feature in major US TV series

The research being conducted on Montague Island Nature Reserve by Nick Klomp and postgraduates will soon feature in a television series about nature conservation that will be broadcast before a potential audience in the USA of over 200 million. The program is hosted by Jason Raize,

who played the lead role of Simba in Disney's Broadway production of the Lion King. He is also a United Nations Good-will ambassador for the environment.

"Keeping it Wild with Jason Raize" is a series directed largely at an American teenage audience. It is broadcast on 197 stations across the USA and each episode will be replayed three times. Since it's beginning it has been extremely popular with the audience. The series includes episodes in remote locations in Africa, Central America and Australia with one entire episode dedicated to the Penguin research on Montague Island.

The New York based film crew spent four days on the Island last week working closely with Professor Nick Klomp. The film crew focused very strongly on the research that is being conducted on the 12,000 strong penguin colony, particularly the way Johnstone Centre staff and students are examining the threats being presented by the Kikuyu spreading across the island and possible solutions for its control. The Montague Island episode is expected to be broadcast within the next month.

Awards



George Turnbull (Superintendent, NPS), Associate Professor Dirk HR Spennemann and Jim Shevock (Associate Regional Director, Pacific West Region, NPS) at the Award Ceremony

On 24 June 2001 Associate Professor Dirk HR Spennemann received the 2000 Partnership Stewardship Award for Cultural Resource Management from the United States National Park Service, Pacific West Region Office, San Francisco, for his "numerous outstanding accomplishments in archaeology, research, education, cultural resource management, heritage eco-tourism, and disaster preparedness [which] have greatly benefited the National Park Service and [its] Micronesian Historic Preservation Programs" (Award Citation). Prof. Spennemann is the first the first non-Park Service employee and the first non-American to receive this award.



Postgraduates

Measuring Community Values for Nature

Caroline Winter is a third year PhD student in the school, being supervised by Dr Michael Lockwood, and her project is to develop a scale to measure a range of values for natural areas: intrinsic, use and non-use values. Analysis of the data from a survey sent out in May is now being undertaken. The survey comprised a 34 item psychometric scale, a scenario section that provides some background information and then asks respondents to make a trade-off decision about the use or conservation of a natural area, and a demographic section. Several survey versions were designed, to test whether different types of natural areas (forest and wetlands) and the presence of endangered species influence respondent's trade-off decisions. The survey is the result of several months of planning and development: focus groups and other consultations with members of the general public were held in both Albury and Sydney, and a pretest survey of 600 was sent to the general public last year. The sample population for the survey was made up of 4,000 members of the general public drawn at random from the Victorian and New South Wales electoral rolls, plus 2000 conservationists and farmers. An overall response rate of 55% was received, with a total of 3054 surveys making up the final data set. Exploratory factor analysis (EFA) is being used to identify key items for development of the scale to measure the main value types. Confirmatory factor analysis using AMOS will then be used to support the EFA and to develop a model that incorporates the scenario trade-off decision and demographic variables. An ARC Large Grant is funding the project. Caroline had been asked to present the initial results at a conference hosted by the International Symposia on Society and Resource Management at La Maddalena National Park, Italy in November this year. Due to international terrorist activity, the conference has been postponed until 2002.

Report on Study Leave

Integrating Nature Conservation and Production Agriculture: by Associate Professor David Goldney

I was funded by Land and Water Australia to assess quality outcomes in research, teaching and practice in my study area. I also wanted to be back in Australia for the birth of our first grandchild in early October!

The dollar was down, terrorists were active and the travelling required was unrelenting. Over ninety days I travelled about 70,000 km along major air routes, and in Northern Europe, the United Kingdom, Ireland, and the United States by plane, hire car, fast and slow trains, ferry and cabs and of course on foot. I met many extraordinary people in eight countries, at Universities, research establishments, farms, NGO's and government departments. In Europe I travelled through four additional countries on the way to my appointments. Most people I

had never met before but there were the few familiar faces like Professors Paul Opdam in Utrecht, Willy Riple in Berlin and Paul Erlich in Stanford. The others I had met previously only through the Internet or through mutual acquaintances.

Occasionally I sneaked in some intentional site seeing. However the long transect drives by train and car allowed me to get 'a feel' for the countryside. In Europe the train systems were magic and very fast, except for parts of East Germany where trains creaked along at 25 km on the old infrastructure. At times I was just scared to be with an ex student rocketing along at near 200km on the freeway between Frankfurt and Rudesheim. In the United Kingdom I travelled frenetically by car along the motorways, writing one off along the way with fortunately no one hurt. In Ireland one entered a time warp with long times spent on roads over relatively short distances often behind the inevitable farm tractor. To eke out my budget I was happy to use B and Bs or family hotels in Europe and standard motels in the USA, along the way meeting many ordinary people from local communities whose views were always interesting to canvass. But there were the occasional 4-5 star hotels when nothing else was available.

Joan, my wife joined me in Ireland after six weeks travelling by myself. Our flight to Boston early in September was uneventful. I had planned to meet with various colleagues around Boston and in New York but for various reasons the appointments made over the Internet evaporated. To save time we drove straight to Washington DC where we would base ourselves for ten days and then 'fly and drive' to various locations within the USA. On our way to Washington D.C. we could see the World Trade Centre in the distance and reflected that in a few days time we would be flying back to see Professor Foreman at Yale and perhaps might have time to visit the WTC!

September the 11th changed all my previous planning. We were staying at College Park in Virginia, near the university of Maryland where I had appointments with colleagues and taking the Metro (underground) as needed into Washington DC to various appointments. On the morning of the 11th we were late in catching the train, as the local car park was full. We had heard on the radio that a plane had crashed into one of the towers of the WTC. We assumed that it was an unfortunate accident. As we emerged from the train at the Smithsonian station one stop from Pentagon station (500m across the river), the terrorist plane had struck the Pentagon and stations signs had lit up communicating a major security alert was in progress. My appointments for the day were to be with officials from US Department of Agriculture conveniently located on the rim of the Washington Mall. Joan was heading for a nearby Smithsonian Museum. By the time we had emerged from the underground, confusion and chaos was everywhere. Sirens wailed and people were pouring out of buildings. All appointments were off. As the scale of the terror that has been unleashed became apparent in the middle of grid-locked Washington D.C., we headed for one of the few



cafés that remained open and glued ourselves to the TV before heading back to the safety of our motel. Our nightly routine thereafter was to follow the tragic saga on one of a myriad of TV channels.

There after we made the decision to drive across the USA from Washington D.C. to LA. Fortunately we were able to hold onto our hire car. They quickly became near unprocurable items. Even trucks were being hired out at car rates to enable people to get back to their homes. Fortunately a number of pre-arranged appointments were located on the east-west route that we were now committed to along with a strenuous driving timetable.

It has been an extraordinary experience. As I reflect on 'what it all means' over the next two months, I will be able to report on the opportunities for research, new course possibilities, and research collaboration, as well as to some important implications for R and D in Australia's agricultural landscapes. That will be the scope of my article in the next edition. It's great to be home, it's great to be a grandfather (8th of October) and it's good to be interacting with my work colleagues again. Hopefully I have been a worthwhile ambassador for the University and for L and W.

Conferences, Seminars & Events

Ian Byron a PhD candidate at the School of Environmental and Information Sciences will be the **Keynote speaker at the 5th Annual Victorian Landcare Coordinators and Facilitators Forum** to be held in Kangarooie, Princetown from the 11th-14th of November. Ian will present findings from his recent survey of Landcare Support Staff in Victoria. This survey is part of his doctoral research exploring the assessment and management of burnout in Landcare being completed under the supervision of Dr Allan Curtis and Dr Michael Lockwood and funded by Land and Water Australia.

Heritage Interpretation in the Pacific



The 250-year old Bai (Chiefs' Meeting House) of Irai, Republic of Palau, which was the focus of field exercises during the workshop Heritage Interpretation in the Pacific.

Cultural heritage management in the Pacific is a complex balance between the administrations of modern nation states, the continuing role of tradition, the segmented influences of the colonial past and the encompassing influences of the modern world. The Pacific Islands Museum Association in collaboration with the World Heritage Centre organised a workshop on Heritage Interpretation in the Pacific, which took place in Koror, Republic of Palau (Micronesia) in late July and early August, which was attended by participants from all parts of the Pacific. The Johnstone Centre's A/Professor Dirk HR Spennemann was one of the keynote speakers. Together with Neal Putt, heritage specialist from Rome (Italy), he will be editing a book derived from the workshop. The book is due to be published in November 2001 by the Pacific Islands Museum Association.

Although Andrew Fisher will be leaving to take up another position in Adelaide, he will of course be back as co-convenor of the **Inaugural Australian Ornithological Conference, 4 - 7 December 2001, Bathurst campus**. Over 100 papers are to be presented on all aspects of bird-related research.

Note also that "Results & Thankyou Day" for "**The future for birds in the Bathurst landscape project**" which was scheduled for May is now definitely on 20 October (barring any more accidents!). This day will provide an opportunity for communicating the results of this project that Andrew has been coordinating to the wider community.

The planning for the **2002 Fenner Conference** is well under way and is to be held on **14 to 16 May at Rydges Hotel Canberra**. The theme "Agriculture for the Australian Environment: has aroused a great deal of interest from both the scientific and farming communities. Confirmed keynote speakers to date are:

- Andrew Campbell, Executive Director Land and Water Australia
- Dr Ted Lefroy, CSIRO
- A/Prof Margaret Alston, CSU
- Dr John Williams, CSIRO
- Prof Craig Pearson, Bureau of Rural Science
- Dr Richard Stirzaker, CSIRO
- Roberta Brazil, Farmer and LWA Chair
- Arron Wood, Young Australian of the Year Recipient

Because the aim is to have interaction between scientists, land managers and farmers, a number of catchment groups have been approached to be involved. There has been significant interest from groups from the Mallee, North East Victoria, Murray, Glenelg Hopkins, South Australia and Western Australia. The aim is to have a wide representation from across the country.

A brochure, call for papers and web site is forthcoming but if you want to know any more contact Dr Ben Wilson (email



bwilson@csu.edu.au, Tel. 02 60519675) or Dr Allan Curtis
(email acurtis@csu.edu.au, Tel 02 60519945).

Other Matters

Your Budgets!

As the end of year draws closer I would just like to remind you that the University finance system operates on a calendar year. This means all of you who are Budget Managers for projects are required to supply me with a revised budget for 2002 for all of your codes. I will then enter those on the system to allow for payments in 2002. Please contact me as early as possible on X19992 or email lywilson@csu.edu.au

Dates for your diary

The Johnstone Centre AGM is scheduled for 14 December and will be held in the new theatre complex at the Thurgoona campus. An informal Christmas lunch will follow.

The annual workshop we normally schedule for the end of year is now to be held during February "O Week" 2002. At this time we have not set a date. The program will cover displays of postgraduate posters and will focus on industry driven research.

We are always looking for information to include in the Centre newsletter, so if you have any news, please let me know on X19992 or jcentre@life.csu.edu.au

Staff Arrivals & Departures

Andrew Fisher is taking up a position as an Ecological Consultant with QED Pty Ltd (Quality Environmental Decisions) back in his home town of Adelaide. Andrew's last official day at CSU is 9 November but he will be taking a week of leave before that to move, so his last day in the office will be 2 November. He will be keeping his links with CSU as an Academic Associate. We take this opportunity to wish Andrew all the best in his new position and thank him for his considerable contribution to Centre activities over the years. Good luck Andrew.

End