



The Australian Society for Parasitology Inc

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From The President's Desk



With the growing ASP membership, the Society's continued strong financial position, the increasing international profile of our flagship journal (IJP) and the first annual ASP conference with the ARC/NHMRC Parasitology Network this year, it is certainly a time to reflect on the Society's aspirations and future directions. The Executive this year is attempting to consolidate the Society's operations. In this vein, our executive secretary Jody, has done a sterling job with many fantastic ideas and Vern has had the foresight to streamline the finances for the ASP which will be greatly appreciated by future Treasurers, I'm sure!

The upcoming annual ASP/Network meeting developed by the organizing committee looks fantastic. The organization and logistics have involved many dedicated people and many members of the ASP have given up their time to contribute to this conference under the positive tutorage of the Network convener Nick Smith. It is sure to be a huge success and we hope you all will be there!

We continue to get quality applications for the JD Smyth travel award from many students requiring travel assistance for many varied reasons. Four

outstanding recipients have been selected and awards will be presented at the ASP/Parasitology Network Conference this year.

The ASP website looks like it will also be getting an exciting overhaul and Mark Sandeman gave us a sneak preview at our recent mid-term council meeting. Mark would really appreciate feedback from the Society's members on ways you see the ASP website improving.

A busy time now is expected in preparation of the Society's bid to host ICOPA 2010 in Melbourne. All documents are required by the executive board of ICOPA by the 30th June, 2006. We are working closely with the Melbourne Visitors and convention bureau (MVCB) who are able to professionally support the documentation and attain support letters from key Ministers, Lord Mayor, Convention organisers etc.

The formalities for the appointment of the new IJP editor are complete. Nicholas Sangster is currently at WEHI and along with Maria Meuleman, have facilitated the smooth transition and running of the journal to Brendan Crabb. Contract renewal of the journal with Elsevier is also complete.

I hope you all have/are surviving the stress of ARC and NHMRC applications and look forward to meeting you at our upcoming annual conference.

David Piedrafita



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After three rewarding years in the role of Newsletter editor, I must inform you that this will be last issue I will put together, for a while at least. My time as ASP President begins at the AGM at the Gold Coast in July. I have seen all of the hard work that David Piedrafita and his executive have put into the ASP this year, and I realise that there will be simply not be enough time to devote to both roles.

Michelle Power of Macquarie University has been helping me put together this and earlier issues of the newsletter, and I am very happy to nominate her to council and the society as the new editor. I wish her well as she takes on the role.

To all ASP members, I must say that I have enjoyed being the editor of OUR newsletter. The ASP is such a friendly and open society, and the regular contributions from many different labs are testament to this. How many society newsletters have contributions about recent births to lab members, about senior scientists missing the boat from Rottnest Island, or about your parasitological adventures in exotic locations? On behalf of Michelle, I ask you to keep sending these items in.

Malcolm Jones

David Jenkins and I represented ASP at "Science meets Parliament," (SmP) held in Canberra on February 28 & March 1. SmP gives us the opportunity to present to politicians the issues that are important and to raise the profile of parasitological study in Australia. This year, Australia's energy futures were identified as a key issue among many of the politicians.

The first day consisted of a briefing session on the aims of SmP, key issues and how to lobby parliamentarians, a National Press Club lunch featuring the Minister for Education, Science and Training, the Honourable Julie Bishop, a forum on Science and public policy and the SmP dinner at the Great Hall of Parliament House with Prof Ian Frazer, 2006 Australian of the Year, as guest speaker. Prof. Frazer's presentation was one of the highlights of SmP, recounting the events that led to the discovery of the papilloma virus vaccine.

The underlying theme of the 1st day was that demonstrating how and not why your research is important and benefits Australian society is vital to getting a politician's attention and therefore paramount to making them want to do something about it.

The second day was primarily concerned with meeting politicians at Parliament House, but also included forums concerned mainly with Australia's energy futures. David had meetings with 3 ALP MPs during the day; Annette Ellis (Canberra) who was extremely interested in David's work with wild dogs as well as biosecurity issues, Anna Burke (Melbourne) who was interested in biosecurity and Dick Adams (Tasmania) who was interested in biosecurity but unfortunately was busy and could not attend the meeting.

I also had three meetings; Ian Causley (National MP, NSW) who had a deep interest in all rural issues, Anne McEwen (ALP Senator, SA) who was interested in biosecurity and Glenn Sterle (ALP Senator, WA) who was also interested in biosecurity. As well as talking about the benefits of our research, we both tried to emphasise (along with many others) that more and better trained science teachers at schools would encourage and inspire students into science as a career. Generally the politicians we met were positive towards our views, and David has even arranged a follow up visit with Annette Ellis.

Nathan Bott



Closing Dates for Nominations for ASP Awards

Bancroft-Mackerras Award - December 31st 2006 (for award in 2007).
Invited Lectureships Travel Grants - December 31st 2006.
JFA Sprent Prize - Next round to be announced Issue 2, 2007.
JD Smyth Travel Awards - December 31st 2006.
ASP Fellowships - before next mid term Council meeting (March/April 2007)

See announcements in this Newsletter or visit the ASP website for more information : www.parasite.org.au



Vale Ian Barger

May 1942 – 25 April
2006

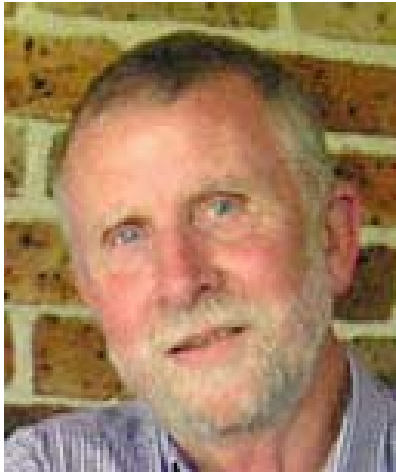


Photo courtesy Dennis Watson

Ian Barger joined CSIRO's Chiswick Laboratory at Armidale in May 1968 to work in the Parasitology Group. He continued at Chiswick for the next 28 years developing a reputation in parasitological research that made him a highly respected expert in Australia and overseas.

Ian's "larrikin" approach belied a genuine curiosity in science generally. "Down to earth", is another phrase often used, very aptly for an agricultural scientist, but it reflects Ian's real loathing for pretension. Ian's early research on the physiological and nutritional basis for impaired wool growth in worm-infected sheep was classical stuff – very well designed, conducted and interpreted. Equally significant was Ian's observation that sheep which were resistant to infection produced less wool when subjected to larval challenge. This spawned a whole sequence of investigations, and controversy, which continues to the present day.

From the late 70s through the 80s,

Ian researched the population biology of sheep nematodes and pioneered the formulation of mathematical simulation models. Subsequently, Ian's knowledge and creative ideas were crucial to the development of the "Wormworld" model and its application. Ian's seminal work has been described as the "gold standard" for mathematical modelling and predictions.

Among Ian's most important scientific legacies are his excellent scientific reviews. These are without exception, clear and complete interpretations of the state of knowledge, elegantly written and often containing thought-provoking ideas to challenge orthodox thinking. As well as being a gifted writer, Ian was one of those rare scientists who had the ability to explain complex theoretical concepts in understandable terms, and relate them to the practical issues of worm control. This was welcomed enthusiastically by graziers, extension workers, consultants and industrialists alike. His willingness to "travel the circuit" in Australia and New Zealand getting an extension message across was really appreciated.

Above all, Ian's hallmark was the dry wit and intelligent, sardonic humour with which he peppered his interactions with us all. His kindness, thoughtfulness and care in mentoring, and humility are all qualities that he brought in abundance to our scientific world and enriched our lives. In a farewell email to all staff in 1996, Ian's words describe his career memorably:

Today is my last day in CSIRO after 28 years service, which saw

me progress from a junior Experimental Scientist to Senior Principal Research Scientist. How does it feel?

First, real gratitude to CSIRO for giving me the opportunity to develop an absorbing, successful and rewarding career doing research on the most economically important diseases facing the Australian sheep industry - those caused by worm parasites.

Secondly, pride in the achievements of the team of which I was a member; a team that can be fairly described as the most successful multi-disciplinary team ever to address the challenges posed by parasites of grazing livestock anywhere in the world.

Thirdly, regret at the end of my professional association with some of the most intelligent, committed and dedicated people one could ever hope to meet.

John Steel



Vale Douglas Bruce Copeman AO



Bruce Copeman was born in Dalby, Queensland, and graduated in Veterinary Science from the University of Queensland. He was subsequently the District Veterinary Officer in Townsville, Rockhampton, Gayndah and Mt Isa before moving to the USA to undertake a PhD on *Ascaris suum* in pigs. Having completed his PhD, Bruce returned to Queensland to a Lectureship in Veterinary Parasitology at James Cook University.

Bruce Copeman was the "mainstay" of parasitology in north Queensland for over 30 years. He was an inspirational researcher, mentor, friend and collaborator to many parasitologists in Australia and overseas.

Bruce became a lecturer in Parasitology at James Cook University in 1970 where he remained until his retirement in 2003. He was a member of the Society throughout his teaching career and was President in 1989. He maintained an unfailing support for the Society by personally attend-

ing the Annual Scientific Meeting and by ensuring a cohort of post graduate students from Townsville attended each meeting. This may nowadays seem inconsequential, but until the 1989 meeting in Townsville, the ASP had never held a meeting outside the "southern capitals" and travel from Townsville to annual scientific meetings was both expensive and often not particularly easy. Indeed, Bruce successfully organised the 1989 conference, the 25th anniversary of the foundation of the Society, despite what most would consider being fatal logistical nightmares such as the National pilot's strike.

Bruce's contribution to parasitology through his research was both broad and extensive and it is not possible to summarise his contribution easily. He supervised 52 post graduate students from a diverse range of countries working on an extremely varied range of parasites including nematodes, trematodes, protozoans, flies and snails. Perhaps the most significant work Bruce undertook was on the filarial nematode *Onchocerca*. What started in 1975 as a study of the filarial parasites of cattle in northern Australia, their life cycles, distribution, prevalences and pathology soon became a major international effort with over 18 years of continuous funding from the WHO. This period of his work focused particularly on immunity to filarial infections (in conjunction with Graham Mitchell in Melbourne) as well as testing macro-filaricidal drugs, developed using rodent models, against *O. gibsoni*, prior to their use against *O. volvulus*. During this time he also became head of a WHO Collaborating Centre for Onchocerciasis at JCU. This led him subsequently to studies of bovine stephanofilaria in Australia and of human filariasis caused by *Wuchereria bancrofti* in Papua New Guinea including the development of novel immunological tests for the parasite with PhD student Simon More, which is now considered the gold standard for diagnosis.

A highlight of Bruce's more recent work is the development of new biological approaches to the control of fasciolosis in SE Asia where it is regarded as the most important disease of cattle and buffaloes. New and substantially improved tests for *Trypanosoma evansi* were also developed. This research graphically demonstrated the likely devastating effect infection with *T. evansi* would have on wallabies should it enter Australia or Papua New Guinea. Bruce published an extensive list of refereed publications in high quality journals. The list might have been much longer were it not for Bruce's self-deprecatory nature; he often declined to be a co-author on papers if he considered he had not made a sufficiently important contribution. He consistently underestimated the importance of his contribution!

Bruce was the only Parasitologist to attain Fellowship of the Australian College of Veterinary Scientists (Pathobiology). In 2001, Bruce was awarded the Kesteven Medal by the AVA/ACVSc in recognition of his contribution to improving animal health in developing countries in the field of parasitology. In 2004, Bruce's work was acknowledged in the Queen's Birthday Honour's List when he became an Officer of the Order of Australia for service to veterinary science, particularly in the area of parasitology as a leading researcher, educator and administrator. In the same year, he was made a Fellow of the Australian Society for Parasitology, which he regarded as a real Honour. Finally in 2005, just weeks before his death, Bruce was awarded an Honorary Doctor of Science for his service to James Cook University.

Bruce was afflicted with myeloma several years before his death. Although compelled to resign from his position at JCU, he continued to work, in spite of the limitations of peritoneal dialysis. He simply took his electrolyte bags to work, hooked them up to the shelf above his desk



and continued to work at his computer. It was only when he became severely debilitated that he was forced to give up work entirely. His attendance at the annual meeting of the ASP in Perth to accept his Fellowship was similarly associated with the shipment of about 200 litres of dialysis bags to his hotel room, a phenomenon which most delegates would not have noticed and which Bruce would not want to have been noticed.

Bruce was a true legend and will be sorely missed by his colleagues, his former students and his wife Gai and children Jerome and Jessica.

Prepared by Simon Reid and Ian Beveridge



Proposed Change to ASP Constitution

It has come to the attention of Council that many students apply for membership of the ASP in the early months of the year, usually at the time they enrol for a higher degree. Because the ASP Conferences are scheduled for July for the coming years, this early start will render many students ineligible for the ASP Student Travel Grants, at least in their first year of membership. To resolve this conflict, a constitutional change is proposed, to be voted on by members of the Society at the Annual General Meeting at the Gold Coast Conference. In addition a phrase is removed to clarify the statement that all recipients of the award must present a oral paper or poster at the conference. The Article XIII currently reads:

ARTICLE XIII. STUDENT TRAVEL GRANTS

Eligibility for Scientific Meeting Travel Grants to assist members attending scientific meetings of the Society is limited to bona fide students who are enrolled at a recognized Australian University and for an additional period of one year following completion of their studies. Eligibility for Scientific Travel Grants is further limited to individuals who have been financial members for at least six months prior to the General Business Meeting. Applicants who have completed their postgraduate studies will additionally be required to present a paper at the scientific meeting for which the grant is awarded.

It is proposed that the article be changed to remove the words “who have completed their postgraduate studies” from lines 4-5. It is also proposed that the following sentence be added: “If circumstances in a particular year should disadvantage students from qualifying for the Grants, Council may elect to alter the period of prior membership to at least three months for that year only.” It is proposed that the new article read:

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Jody Zawadski
Executive Secretary





**Australian Society for
Parasitology
Mid-Term Council Meeting**

Friday 10th March 2006
University House
The University of Melbourne
Parkville.

Present and Apologies

David Piedrafita (DP), Malcolm Jones (MJ), Simon Reid (SR), Vern Bowles (VB), Nick Sangster (NS), Carolyn Behm (CB), Shelly Walton (SW), Charles Gauci (CG), Julie-Anne Fritz (JF), Michelle Power (MP), Rebecca Traub (RT), Nathan Bott (NB), Katharine Trenholme (KT), Nick Smith (NSm), Mark Sandeman (MS), Jody Zawadzki (JZ), Brendan Crabb (BC)

Apologies: Carley Bagley (CBa)

Minutes of Previous Meeting

No Changes to the Minutes of last Meeting

Motion: The Minutes of the last meeting be accepted (SR/MJ). Unanimous

Business Arising from 2005 End-of-Term Council Meeting

ASP President to organise a meeting with Queensland Museum for Intimate Aliens (see separate agenda item).

Executive Secretary to contact RGSQ regarding membership lists (see separate agenda item).

SR to speak to NSm regarding 2006 Conference (see separate agenda item).

Previous secretary to contact 2 resigning members and suggest Robert

Suthert consider becoming a life member (waiting for RO to reply). SR to ask IW if SA can host 2007 conference (see separate agenda item).

Consider drafting a constitutional change regarding evaluation of BMM for discussion at next MTM (see separate agenda item).

3 Fellowship nominations deferred to next meeting (see separate agenda item).

Increase amount in Sprent account to \$50,000 (completed, VB).

Increase payment of Sprent award to \$4,000 (completed, VB).

To grant \$13,000 to AHC at SA Museum (complete, SR).

Reports

President's Report

Written report was provided by DP.

The Executive Committee is attempting to consolidate the Society's operational running for the benefit of future Executives.

There has been considerable progress towards the bid for ICOPA 2010.

Intimate aliens has been faced with difficulties and a decision is required as to how to proceed.

Formalities for the appointment of the new IJP editor are complete and hand over is in progress.

Several applications were received for the last round of ASP awards.

Motion: The Presidents report be accepted (MP/CG). Unanimous

Treasurer's Report

Written report was provided by the treasurer. The report includes the 2005-2006 budget.

The Profit/Loss statement indicates a current operating loss. This loss will be offset when IJP royalties are received from Elsevier in April.

The movement of mailing addresses for all accounts to the Incorporations Secretary (MJ) was discussed. This would obviate the need to change the mailing address each year and

should also reduce delays in receiving statements from previous Treasurers each year.

VB updated Council on all accounts currently held by the ASP and the asked for decisions to be made on the current placement of funds.

Student travel to the 2006 conference was discussed. For students to be eligible for financial assistance, they must be a ASP member for at least 6 months prior to the AGM. This will not be possible for new students now that the conference is held in July.

Motion: To advertise a Special Student Award for 2006 and to allocate \$10,000 within the budget for this purpose (NS/CB). Unanimous

Announcement: The Australian Society for Parasitology would like to announce a Special Student Award for 2006. This cash award is to be presented at the General Business Meeting to a member of the Society who has been financial for at least 3 months prior to the General Business Meeting, who is a bona fide fulltime student, for presentation of research findings in the form of a paper and/or a poster delivered at the scientific meeting of the Society and judged by Council members and other Society members to be of a high degree of excellence.

Action: To advertise this award on the ASP website (MS) and in the ARC/NHMRC Parasitology Network newsletter (NSm).

Motion: To change the Constitution so that students who join the society at the beginning of the academic year are not disqualified from eligibility for the Student Travel Grants. The proposed constitutional change is to be advertised in the April/May 2006 newsletter.

Motion: To allocate \$15,000 within the budget to cover 3 Invited speakers (ASP Invited Lectureship Travel



Grants) at \$5,000 each for the 2006 conference (MJ/JZ). Unanimous

Motion: The Treasurers report be accepted (SR/CB). Unanimous

Secretariat/Incorporation Secretary Report

Written report was provided (JZ). Current membership is at 364 financial members. This includes 35 new members since 1st July 2005.

There are a significant number of non-financial members.

It was noted that there are too few ASP Fellows.

Motion: The Secretariat report be accepted (NB/CB). Unanimous

IJP Editor's report

Written report was provided (NS, see attached).

2005 was a good year with 134 publications from 551 submissions. Submissions increased from all geographic areas except from North America increased compared to 2004.

The impact factor increased to 3.092. The next 5 year term contract with Elsevier started in January 2006. This contract is in the form of a letter that is automatically renewed unless changes are requested. Elsevier approached the ASP to draft a new contract. This was declined as the current letter is in our favour, with Elsevier paying the ASP 25% of IJP royalties. We are unlikely to strike as good a deal with another company.

BC has been appointed as the new Editor-in-Chief and will take up the position in April 2006. Decision on Deputy expected mid next week.

NS wished BC luck and gave special thanks to Maria Meuleman and John Ellis for their great work for the IJP. BC thanked NS for hand over and all his efforts for the society and journal. Special thanks also to councillors who served on the interview panel.

Motion: The IJP Editors report be accepted (CB/MJ). Unanimous

Newsletter Editor's Report

Written report was provided by MJ. The booklet that contains the Constitution, membership list (requires an update) and live collections (requires an update) will be printed and sent to all members with the next newsletter.

NS suggested that access to the live collection info would be beneficial on the website. The back page of the booklet could contain other useful information that is available on the ASP website.

MJ to stand down as Newsletter Editor for the term of his Presidency. MP to stand in as acting Newsletter Editor.

Motion: To change the budget for newsletter costs for 2005-2006 to \$4442 (NS/NB). Unanimous

Motion: The Newsletter Editors report be accepted (NS/KT). Unanimous

Archivist's report

Oral report was given (CB)

Following up on Desmond Smith films (ongoing).

Electronic back-ups – plan to scan all meeting abstracts. These are held off-site at Archives of the Academy of Science and are therefore difficult to access. CB to provide a quote (ongoing).

Procedure for archiving – the Exec Sec is to keep all records for the previous 2-3 years. Each year Exec Sec to send prior records to the archivist.

Motion: The Archivists report be accepted (MJ/MP). Unanimous

Webmaster's Report

Oral report was given (MS).

Current web page is dated and cluttered. MS gave a demonstration of the progress of the new web page. The aim was to keep the site simple with fast access to pages.

MS made a request for new images for inclusion.

Should the ASP logo be updated? The symbol is historical, but it might be preferable to sharpen the image.

Suggestion to set up a β -site for council members to test the website before going live.

Motion: Request for the webmaster to provide a quote for the development of the new website and the Executive to pay to a limit of \$2,000 (SR/DP). Unanimous

Motion: Request for the Webmaster to provide a quote for ongoing upkeep of the website (SR/DP). Unanimous

Motion: The Webmasters report be accepted (NB/VB). Unanimous

ARC/NHMRC Research Network for Parasitology Report

Written report was provided by NSm. The Network Management Committee and Advisory Committee for 2006 have been determined.

The Communications Coordinator has provided monthly newsletters, combined the email and mailing lists of Network members and ASP members as well as redesigned and updated the Network and ASP Conference websites.

A Public Relations Officer has been appointed to ensure the future funding of Network initiatives beyond 2009 when the ARC/NHMRC grant is due to finish.

15 travel awards, 1 workshop and 1 grant writing retreat have been funded.

An offer of new prizes to be awarded at the annual conference will be announced shortly.

Motion: The Network Convenors report be accepted (CB/MP). Unanimous

Conference Reports

2005 ASP/NZSP/WAAVP New Zealand (NS)

The conference was a great success. Attended by 665 delegates with >200 Australians.

Attempted to cater for all members in the program.

2006 Queensland (MJ)

Well under way, only small changes may be required.

Information is available via ASP and Network websites.



Social aspects are well organised. ETM accommodation and meeting room has been organised for council. Conference committee would like to invite retired prominent parasitologists to a day of the conference and organise a car to pick them up. MJ suggested John Sprent and John Pearson. Should schedule with a social lunch or afternoon tea and maybe formalise by providing a minder. CB suggested a concession registration for retired Fellows and life members to allow them to attend the conference.

It was mentioned that the online registration form can not be printed. NSm to discuss with Lisa Jones.

2007 Conference (CB)

Conference will be held in Canberra, subject to a venue.

National organising committee: CB as chair, DP (ASP VP), NSm (Network convenor), Kairin Kirk, Kevin Saliba and JAF as local representatives.

Include BC in correspondence for suitability for possible IJP reviews.

ICOPA 2010

Bidding process is under way. DP will target council for help when required.

Melbourne has a good reputation due to the success of the Genetics Congress.

Need to ensure registration is not too expensive and that there are facilities for Asian delegates. The major expense for delegates will be the airfare.

The Bureau will prepare communication package.

Should begin to consider high profile (international) Parasitologists to support the bid. Suggestions include Graeme Mitchell, Gus Nossal, Alan Johnson, Ian Beveridge, Andy Thompson, John Dalton, Alan Cowman.

Motion: To allocate \$5,000 (cap) to cover travel of the President to ICOPA 2006, to represent the 2010

bid. (SR/MS). Unanimous

Awards

Non-council members were asked to step out to respect the confidential nature of Fellowship and BMM applications (BC, NSm & NS)

Bancroft-Mackerras Medal

A single nomination was assessed by the BMM committee. (CB)

The nominee was successful and will be awarded at the conference.

DP to contact the nominee.

JZ to organise medal and folder.

Fellows of the Society

3 nominations for Fellowships were received. All nominations were successful. (unanimous).

DP to contact nominees.

JZ to contact the nominators and organise folders.

Invited Lectureship Travel Grant

MJ suggested 3 possibilities: Prof Paul Brindley, Dr Kate Hill and Dr Alistair Dove, all of whom, coincidentally are expat Aussies.

Council resolved to offer all three a travel grant(unanimous).

JD Smyth Travel Award

Received 9 applications.

Council decided to award 4 awards in this round because it is an ICOPA year.

It was decided to increase budget to \$20,000 for the year, and each award to be valued at \$2,500 each.

4 awards given as assessed by the exec committee (DP, VB and JZ).

JZ to notify all applicants of the council's decision.

Undergraduate student prizes

VB has updated contact lists for relevant Universities.

All correspondence to go via the Incorporations Secretary (MJ) prior to the Treasurer.

Student Travel

Postponement of previous Award (Yu Rong Yang/visa difficulties and Vanessa Glennon/travel warnings).

Due to the safety aspects of travel

one awardee, the council decided to offer \$2,500 to travel to a relevant international meeting at an alternate destination.

Other Business

Procedures for Award Nominations

By-Laws contain procedures for nomination for BMM, Sprent and Invited lectureship but no procedure for Fellowship or JD Smyth (should these be included?).

Review of BMM award guidelines: A proposed draft amendment to the Constitution from the current committee was tabled. Historically the BMM was for a mid-career, active research scientist; however this is not clear in the guidelines (CB).

Action: MJ and CB to draft a set of guidelines/selection criteria for nomination for BMM to form part of the By-Laws. This draft is to be circulated to council prior to ETM to allow contribution.

Review of processes: The BMM Chair contacts the nominators of unsuccessful applicants and the applications are returned to the nominators 1 month prior to AGM and the paper trail destroyed.

Review of selection committee: The Exec Secretary is to keep a list of previous committees and a list of active Fellows. Leo LeJambre to stand down and Andy Thompson to replace.

Require more nominations for Fellows (must stay below 10 % of the membership, currently the number of fellows stands at 5% of membership). DP to encourage ASP members to be proactive in nominating new fellows.

As an award for newly elected Fellows, the Society normally pays for their accommodation and registration (and maybe fares?) to attend the AGM at which the award is presented. This isn't actually written into the Constitution, unlike for the other awards. It should be added to the By-Laws. Also add that a 1-page background and a CV is required for nomination.

JD Smyth, there is no procedure and nowhere does it state how many should be given or the value of the



award etc.

Action: MJ and CB to draft guidelines for BMM, Fellows and JD Smyth.

Parasitology Network

Joint talk at conference regarding the relationship between the ASP and ARC/NHMRC Network.

Network is likely to offer 2 conference awards for early career (as defined by the ARC) to speak at a European Network Conference.

Membership

RGSQ registration new membership process was discussed. RGSQ should provide a receipt to new members that also outlines the acceptance process. This would avoid the delays experienced by new members. Exec Sec to send a welcome letter and forward new member info to relevant State rep. State rep role – to call and welcome new members.

Non-financial members (178 non-financial/500 members). Review of processes for renewals: it would be beneficial to send late renewal reminders to address the number of non-financial members.

Improve contact with International members (email/post).

International requests for ASP membership without two nominees to be declined.

Action: JZ to contact RGSQ to discuss options.

Correspondence with ASP

Re-organisation of the financial accounts in an attempt to avoid the annual problems related to change of address. Suggestion to have all statements sent to secretariat (MJ) who would then be responsible for forwarding this information to the current Treasurer.

This process would also benefit new member applications, where the Secretariat would send to Executive Secretary for approval and welcome process and subsequently to RGSQ for payment and addition to the da-

tabase.

Science Meets Parliament

Report presented by NB (see attached)

2 ASP representatives attended (DJ and NB).

A suggestion for the compilation of a colour brochure with some photographs of parasites in action and a summary in layman's terms of what the society & network stand for together with a summary of current groups and their projects to hand out to the parliamentarians.

Intimate Aliens

DP presented a letter from Rob Adlard (RA).

There are difficulties dealing with Queensland Museum.

Suggestion to obtain the concepts, mock-ups and video and approach other State Museums to gauge interest. Could be linked to National science week and possibly apply for a grant. Questicon is the most likely to move forward.

Action: MJ to contact RA to get a final response from Queensland Museum.

Action: RA, Dave Jenkins, Chris Bryant and Simon Reid to approach Questicon.

Newsletter

Need to provide funds for MP to visit MJ to ensure a smooth transition.

Motion: For MP to take over position of Newsletter Editor for the remainder of the term (MJ/SR). Unanimous

Other Business

History of Parasitology book

One chapter outstanding It was agreed that Ian Beveridge should spend a day with the author of the relevant chapter to get an oral recital, so as to expedite completion of the chapter. The ASP will support travel and an overnight stay. If this fails then approach an alternate author (Alan Donald or Rob Dobson).

ASP to provide a gift for Russell

Hobbs for website service.

Annual State BBQ capped at \$200/State.

SR attended Bruce Copeman's funeral on behalf of the ASP.

Dot points to be provided for each Exec position at the end of term.

MP to attend ASMR.

Meeting was closed at 3:45 pm.



2005 snapshot

In 2005 the IJP set several records. The record income (\$184,000) and impact factor (3.092) have already been reported on. A record 551 papers were received and 134 of these we published (1 remains under review).

Two thematic issues were published. Submissions from all geographic areas, except North America, increased compared with 2004, the increase predominantly came from Asia, South America and Africa. Mean processing time to acceptance has been kept to about 60 days. Of the papers received and published, the most popular areas were Molecular Genetics followed by General Biology and Immunology. Epidemiology and Veterinary Science followed close behind. It is clear that we maintain good coverage of the field both geographically and scientifically.

Our relationship with Elsevier

We have had an excellent working relationship with our publisher Elsevier. In January Life Sciences in Elsevier was reorganised. Claire Minto who looked after our interests very well for 2 years left and all parasitology journals fell under Dale Seaton with Rene Plug responsible for our day-to-day journal activities. Dale is due to visit Melbourne later in March to talk to both old and new editors. He has worked in parasitology in Australia and has a strong affinity with the IJP. This will be an ideal opportunity to strengthen our relationship with Elsevier and plan the future. Renewal of the next five year term of our contract with Elsevier started in January.

Society Service

The Society Service continues. We do not know how frequently it is used, but as a free service it does provide members with access to the

journal. Members wishing to access to the IJP should contact the journal office.

Web submission (EES)

Web submission commenced on 1st May 2005. Although it still has some bugs, it is better now than when we started. One problem that we encounter is in the generation of statistics. Many of the numbers we generate are a little inaccurate and difficult to compare with previous years. The system gives us great detail on transactions and times, but is less able to count total papers and geographic distributions. A recent improvement was the introduction of a generic ethics in publishing agreement that deals with plagiarism and authorship etc.



Thematic Issues

Two thematics "Application of Bioinformatics to Parasitology" (John Ellis and David Morrison) and Parasitic Zoonoses – emerging issues" (Andy Thompson and Darwin Murrell) were published in 2005. The 2006 issues are on "The blood-brain barrier in parasitic disease" (Nick Hunt and Georges Grau) and "Molecular and cellular biology of helminth parasites" (Rick Maizels and Murray Selkirk).

Office

Maria continues to provide excellent support and John Ellis has been great support as Deputy.

New Editor in Chief

Professor Brendan Crabb has been appointed as the new Editor-in-Chief. His deputy editor is Professor Ian Beveridge of Melbourne University. We have arranged this March as a training and moving period in Melbourne prior to Brendan taking up the position in April. Maria and the office move 16th March and the office should be fully operational from 20th March. We have organised a secondment from the University of Sydney to WEHI for Maria until the end of her contract. Given the complexity of the changeover and the move, it is testament to Maria's organisation and the cooperation of Human Resources Departments at both institutions that it has gone (will go) well. Fortunately the EES system is portable and will suffer no break in continuity. Check the websites for the new contact details.

Each new Editor brings change both from necessity in a new location, and also because of new strengths and leanings. Further, the publishing industry is evolving and we have to move with it, especially as communication becomes more international and electronic. I think the IJP is ready for its next phase of development and Brendan is well placed to take us there. I offer him good luck in his endeavours.

Thank you

I especially thank Maria Meuleman and John Ellis for their great work for the IJP. They have gone beyond what was asked of them both in dealing with broad planning issues and with the minutiae of details required to run a successful journal.

It has been a wonderful opportunity to edit the IJP and I thank the Council for having faith in me and successive Presidents for their support. It is a tough job and I owe my survival to the support I have received from my family and colleagues. The members of my lab have suffered my distractions too and I thank them for their patience.

Nick Sangster



Vic News

Congratulations go to Craig Kyngdon whose PhD thesis, entitled "Studies of immune responses to Taeniid cestode antigens" was recently accepted without change. Craig is now working with Marshall Lightowlers on the Wellcome Trust *Animal Health in the Developing World* grant. The research project entitled *Optimisation and field testing of a practical vaccine against Taenia solium cysticercosis in pigs* involves further development of the group's recombinant vaccine for pigs to control transmission of *Taenia solium* neurocysticercosis to humans. We also welcome Julia Lackenby to our group who has undertaken a PhD with Marshall working on immunological studies on the protective immune response against taeniid cestode parasites. Julia comes from Ian Whittington's lab where she did her honours project.

Marshall's group also has a visiting PhD student from Cameroon, Emmanuel Assana. Emmanuel is doing his PhD with Stanny Geerts at the Prince Leopold Institute of Tropical Medicine in Belgium and has also come to work on the *Taenia solium* project for 6 months.

Pauline Cottee, who has worked with Robin Gasser, has submitted her PhD thesis. Congratulations Pauline! She is now working at the CSIRO Australian Animal Health Laboratories in Geelong using RNAi techniques to investigate chicken embryonic development and immunity with Rob Moore who, many years ago, also worked at Werribee. Sia Nickolaou, also supervised by Robin, is in the process of finalizing her PhD thesis.

A new addition to Robin's group is Aaron Jex, who many of you will know from when he did his PhD with Tom Cribb. Aaron is working on typing *Cryptosporidium* from water catchment areas and sequencing mitochondrial genomes of nematodes. Luping Zhang, visiting from Hebei

Normal University, College of Life Science, is also working with Robin on molecular techniques and Anasakids. Congratulations to Robin who has recently been appointed Editor of *Parasitology*, together with Chris Arme and Stephen Phillips.

Ian Beveridge is also supervising a new student, Duncan Borland, who has commenced a Bachelor of Animal Science project to investigate the role of parasites in kangaroo mortalities at Serendip Sanctuary. Ian is still reeling from the recent graduation of a PhD student, Richard Norman, whom he has supervised for a considerable number of years investigating parasitic diseases of the Little Penguin. Congratulations to Richard who is working at Massey University Vet School. Ian fears that Shane, another of Ian's PhD students, may see Richard's time frame for completion as a standard/precedent. Ian does "NOT!!!!!!!"

La Trobe University Malaria Labs

The New Year at La Trobe has seen lots of activity and some changes in the research groups. Olivia Tan has joined Leann's lab as a Research Assistant and a new group of Honours students has started: Fawaz Hassan, Sam Blair, Richard Beaumont, Vesna Vasic and Megan Smith. While at the other end Phil Parker was awarded a PhD and Karen Harris has submitted her thesis. The Centre of Excellence in Coherent X-ray Science has commenced activities with the employment of a post-doctoral fellow, Dr Eric Hanssen (an EM expert), a Research Assistant, Sam Deed, and an Admin Officer, Emma Duglas.

Leann was a speaker at the Optical Probes in Molecular and Cell Biology, Sonoma Valley, California, Dec, 2005, which involved a trip to the wine country. Sarah Frankland was awarded a student poster prize at the 2006 Lorne Protein Structure & Function conference. A satellite Malaria workshop was held before the Lorne Proteins workshop. Robin Anders spoke at the meeting, while

Mick Foley and Leann Tilley chaired sessions.

Warwick Grant will join the Genetics Department in 2007 as a Reader/Associate lecturer. Warwick works in Wellington, NZ on parasites of stock and wildlife, with special interest in *Strongyloides*. He will give lectures in second semester Genetics subjects this year on a casual basis before joining the staff permanently in 2007.

Leann hosted a visit to La Trobe University, on March 10th, by members of the Thai Ministry of Health. Dr. Chaiporn Rojanawatsirivet, Dr. Pongwit Bualombai and Dr. Kanungnit Congpoung. Department of Vector Borne Diseases, Ministry of Health, Nonthaburi, Thailand. The delegation met with a number of researchers including Mick Foley, Robin Anders and Andy Coley (Biochem), Dr Richard Luke (Ag Sci), and Dr Alex Maier and Dr Ian Street (WEHI Bundoora).

La Trobe University Department of Agricultural Sciences, Parasite Control Laboratory

The Parasite control lab at La Trobe Uni has had a busy start to the year with 2 new PhD students and five honours students keeping everyone on their toes. Mandy and Hayley came back from their parasitological exploration of Singapore Zoo with a collection of interesting samples to puzzle over while Kylie started her efforts to find parasite antigens (Cyathostomes) in horse poo by educating some of the local pony clubs and collecting poo at the same time. At least with horses there is no shortage of sample! Meantime our other honours students, Tegan and Nicole have branched out in a totally new direction surveying the endangered Mountain Pygmy Possum at its haunts in the ski fields of Australia. Unless you are tempted to think this is another of those really fortuitous projects that combines recreation with work the students must do all their trapping in summer! The new PhD students include Kate Richards



working on my old favourite sheep blowfly. AWI is funding Kate to have a good look at the initial invasive stage and its specific molecules and processes. This work leads on from my sabbatical last year working in Terry Spithill's lab in Montreal. Finally, Emma Cash has joined us to extend the work on the Mountain Pygmy Possum and its competitor species in the high country. This work is not concerned with parasitology and thus is also supervised by Peter Pridmore from our Albury-Wodonga campus but Mark Sandeman hopes to carry out some investigation of parasites in these animals with an honours student later this year. The other students Jacquie and Steve are progressing and we are learning more about sheep nematode infections and their effects on poo! Peyman the postdoc has *Haemonchus* and *Teladorsagia* under his wing and a number of assays in his pocket which as a mixed metaphor is fine as Peyman is very good at pulling things out of his pockets with his wings!! Finally to keep myself busy with all these helping hands reducing my workload. Mark has on the Deputy Dean's job and is looking forward to a nice quiet period attending various meetings - as far away as possible.

Animal Biotechnology Research Laboratory, Monash University

Big exciting news! The Animal Biotechnology Research Laboratory at the Department of Physiology, Monash University is now operational. This research group is made up of members formerly from the Centre of Animal Biotechnology at the University of Melbourne. It is headed by Els Meeusen, who has moved to Monash to take up a professorship in animal biotechnology and includes Drs David Piedrafita, Joanna Kemp and Mike de Veer. Our new address is: Department of Physiology, PO Box 13, Monash University, 3800. If you're on campus and want to say 'hello', we're in building 13. It would be lovely to see you!

PhD students Nick Robinson, Jill Pleasance and Rebecca Smith have also made the move to Monash. Jill and Rebecca are working hard to write up their respective PhD theses and keeping David very busy with draft chapters. Michael Lees (a joint PhD student with David, Aaron Ingram and Andrew Kotze) will also be working with nematodes, RNAi and immunology. What a great combination – he obviously plans to submit his thesis in 2020 given these tightly defined areas! Michael is lucky enough to be working up in Queensland with Andrew and plans to do a "sabbatical" in David's lab to apply some of his techniques in culture systems set up here at Monash. Ramya Ramamoorthi, has just started her PhD with David too with Sue McClure as a co-supervisor, working on *Haemonchus* parasites. Ramya is a qualified vet and her surgical skills are sure to be highly appreciated. Michael De Veer and Joanna Kemp are also very busy whipping their 3rd year students into shape, as they attempt to guide the students in their endeavours to complete their mini projects.

In other news, Nick Kennedy, one of David's former PhD students has had his thesis passed – well done Nick! Nick also recently published a paper in *Vaccine* about his work. Nick is now working for a company called Phosphagenics in the Department of Biochemistry and Molecular Biology, Monash University. Here, Nick is looking at the transdermal delivery of phosphorylated drugs. He has already had very interesting field excursions to an abattoir and morgue for pig and human skin samples, respectively! We wish him very well in his new job as he diversifies his skills and scientific interests.

SA News

SA Museum / University of Adelaide

2006 marks an especially industrious year for 4 of the 6 current PhD stu-

dents in the Marine Parasitology Lab at The University of Adelaide. Kate Hutson, Allan Mooney, David Schmarr and Rissa Williams are, *allegedly*, due to finish their studies, write papers, compile a thesis each and submit throughout the year. Good luck to each of them in their endeavours. Ian Whittington and Ingo Ernst (now of the Aquatic Animal Health Unit, Department of Agriculture, Fisheries & Forestry) must, *allegedly*, read the fruits of their labours, so good luck to them also! Rissa, in particular, should have no distractions from the task in hand because she has won a job in Wellington with Biosecurity New Zealand in the Ministry of Agriculture & Forestry as a Marine Incursion Investigator. Congratulations Rissa! While writing her thesis at her desk, she can be heard uttering words like 'kungfush', 'chully bun' and 'suxty-sux' as she tries to master the language barrier between here and there!

Julia Lackenby, who completed Honours in the Marine Parasitology Lab in mid-2005, has moved to Melbourne to do her PhD with Marshall Lightowlers. We wish Julia well in her new surroundings and project and have already heard stories of an expanding menagerie of animals such as bunnies, puppies and piglets for her new work on cross-reactivity of tapeworms. All a far cry from kingfish! We'll miss Julia's humour, forthright attitude and apostrophe use in Adelaide.

Lizzie Perkins recovered from the ordeal of Honours last year and, foolishly, returned from her farm in western Victoria in mid-February to embark on a PhD project. She will extend the work she began in Honours to investigate relationships within the monogenean family Capsalidae and try to identify their sister group.

Her new work, co-supervised by Ian Whittington and Professor Steve Donnellan (Evolutionary Biology Unit, SA Museum), will incorporate new nuclear genes and mitochondrial genomic studies. Within days



of enrolling in her PhD, Lizzie accompanied Ian, Leslie Chisholm and PhD student Vanessa Glennon to NSW for the annual Port Stephens Game Fishing Tournament. Most of the angling is tag-and-release, but a few specimens of marlin, tuna, mahi mahi, tiger sharks, hammerheads and makos were brought to the weigh station. The team (see photo below) pulled *Monogenea* from the skin, gills and noses of 3 marlin species (see photo, on right), 2 tuna species and 2 remora species. During the same expedition, a trawler supplied specimens of 2 ray species for Vanessa's project investigating the biology, systematics and identity of *Monogenea* from rhinobatids around the southern half of Australia. Working from a rented unit in Nelson Bay, a parasitology lab was set up complete with phase contrast compound and several dissecting microscopes, tanks, aerators and even a dewar of liquid nitrogen for studying and processing adult and larval monogeneans and their eggs. The local Channel 9 network, NBN TV, even visited and did a short story about a team of parasitologists who drove 'all the way from Adelaide' to study worms from marlin! The team of 4 (known around the weigh station as the 'parasite people') were especially chuffed when the story aired ahead of the news that Thorpie was pulling out



of the Commonwealth Games!

Now back in Adelaide, it's up to Lizzie to make sense of the molecular data that will flow from these parasite collections as Leslie and Ian try to make sense of their morphology. One of the big issues concerning large *Monogenea* from the skin, gills and noses of large, prized oceanic pelagic fish like marlin is that they may have been described several times as separate species, but from different localities around the world. We're trying to unravel the

Australian story first and will then expand outwards from here. Vanessa's project is similar, but more Australia-centric. In the final half of her PhD, she will assess the extent of host-sharing between a suite of monogeneans that may be continuous on rhinobatids from WA to southern Queensland.

SARDI Livestock

Ian Carmichael suffered a heart attack in late November, during the Adelaide Cricket test. He wasn't attending the cricket at the time but does recall a bit of chest pain the previous day whilst walking the dog. He has recovered well following the addition of a stent into the blocked artery. The Christmas break was timely and following a short rest, he resumed duties that included attendance at sheep CRC meetings in January and February. There has been little else out of the ordinary for the group. Reports for continuation of funding have dominated Ian's workload in recent weeks.

The field trips and the laboratory work continue for the others. Micko is much wiser now in relation to transport overseas of frozen plasma on dry ice. He air-shipped some plasma to Ian Barker in Canada in February.

...cont p 19





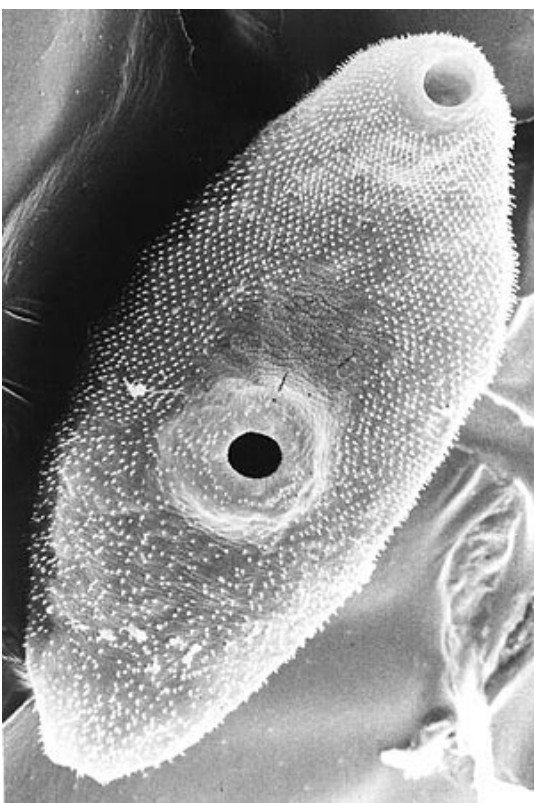
2006 ASP & ARC/NHMRC Research Network for Parasitology Annual Conference

Legends Hotel, Surfers Paradise,
Gold Coast, Queensland, Australia
Sunday 2 - Wednesday 5 July 2006

Registration for the July conference has exceeded expectations. At last count, 238 people had registered, 90 of whom are students. Approximately 160 abstracts were submitted.

A provisional program has been prepared, and the full program, along with details of who has been selected for oral presentations will no doubt appear in your email in-boxes at about the same time as this newsletter arrives.

Unfortunately, not all people who asked to give a talk at the conference will be able to do so, but the organising committee has worked hard to ensure that as many people as possible get that opportunity, and that all areas of parasitological research are represented in the program.



Please note the provisional program overleaf (page 17), which shows when invited speakers are presenting and some of the other events planned for the conference. On the opening night, we will start with the usual “drinks on the terrace”, but we will also be holding a special symposium entitled “Ten things you didn’t know about parasites”- a lively and quirky look at world of parasites through the eyes of a range of Aussie experts.

The ASP will also be awarding a Bancroft-Mackerras Medal to an ASP member who has made an outstanding contribution to the discipline of parasitology in the last five years. The BMM award and oration are timed for Monday morning. In addition, the ASP will elect three scholars to Fellowship of the Society.

Don’t forget that lunches, morning and afternoon teas are provided, and that sit-down meals will be provided on Monday and Wednesday evenings.



2006 Australian Society for Parasitology & ARC/NHMRC Research Network for Parasitology Annual Conference

Important and Useful Information



For all the latest conference information, visit the conference website:

www.parasite.org.au/arcnet/conf06/

- ◆ The conference will be held at Legend's Hotel on Surfers Paradise at the northern end of the Gold Coast. There is ample transport to and from the Gold Coast and Brisbane Airports, and the most economical forms of transport will be by shuttle buses (http://www.surfside.com.au/shuttle_airporttransfers.htm from Gold Coast, www.coachtrans.com.au from Brisbane). The conference organisers will not be able to organise transfers for participants.
- ◆ **Make sure you organise your own accommodation.** We have asked Legends Hotel to set aside rooms for conference delegates. If you prefer to arrange accommodation elsewhere, many hotels and apartments are available in walking distance from the hotel. Contact your travel agent or Gold Coast Tourism for more information on these.
- ◆ The Conference is timed for mid-winter. This means that the weather will be perishingly cold for Queenslanders and Northern Territorians, but our southern compatriots should find it quite mild. We recommend that you bring warm clothing, especially for evenings and early mornings. Delegates from Melbourne may wish to bring their bathers, however.
- ◆ The Gold Coast is now a large city and we urge delegates to take care of themselves and belongings while out and about, particularly at night.
- ◆ Please inform the **conference organiser, Lisa Jones by telephone 02 95144006 or email Lisa.Jones@uts.edu.au**, if you have special dietary requirements, or any special needs
- ◆ **The conference organisers will NOT be printing conference booklets or supplying satchels.** The conference proceedings will be sent to you as an Adobe PDF file by email attachment in the week before the conference. Please make sure you print your booklets and bring them with you.
- ◆ Other information can be found on the conference website (www.parasite.org.au/arcnet/conf06/) or the hotel website (<http://www.legendshotel.com.au>)





Time	Sunday 2 nd	Monday 3 rd July	Tuesday 4 th July	Wednesday 5 th July
8:30-10:00	ASP Council	ASP Presidential Address plus Bancroft Mackerras Award and oration	Keynote Lectures – Therapies for Parasitic Diseases Professor Robert Sinden (<i>Trends in Parasitology Lecture</i>) Professor Simon Croft (<i>International Journal for Parasitology Lecture</i>)	Plenary Lectures – Therapies for Parasitic Diseases Professor Peter Hotez Dr Michelle Wykes
10:00-10:30		Morning Tea	Morning Tea	Morning Tea sponsored by Virbac
10:30-12:00		Biodiversity, Ecology and Evolution Symposium Dr John Hooper Dr Al Dove Dr Tom Cribb	Therapies for Parasitic Diseases Symposium Prof. Sornchai Looareesuwan Dr Stuart Ralph Dr Kevin Saliba	Therapies for Parasitic Diseases Symposium sponsored by MLA and AWI Prof. Georg von Samson Himmelsjerna Prof. Els Meeusen Prof. Terry Spithill
12:00-13:00		Lunch	Lunch	Lunch
13:00-14:30		Contributed Papers	Contributed Papers	Contributed Papers
14:30-15:00		Afternoon Tea	Afternoon Tea	Afternoon Tea
15:00-16:30	Registration	Contributed Papers	Contributed Papers	Contributed Papers
16:30-17:00		Free time	ASP Annual General Meeting (and Fellowship awards)	Visit to Q1 Tower
17:00-17:30		Poster Session: Oral Presentations		
17:30-18:00				
18:00-18:30	Opening Session Ten Things You Don't Know About Parasites	Poster viewing plus Drinks	Poster Session: Oral Presentations	Pre-dinner drinks
18:30-19:00				Conference Dinner (including student and postdoctoral award presentations)
19:00-	Welcome Reception	Barbeque and Trivia Contest	Poster viewing plus Drinks and Stand-up dinner	

NEW from Cambridge University Press



Nonequilibrium Ecology

Klaus Rohde (University of New England, Australia)

Ecology has long been shaped by ideas that stress the sharing of resources and the competition for those resources, and by the assumption that populations and communities typically exist under equilibrium conditions in habitats saturated with both individuals and species. However, much evidence contradicts these assumptions and it is likely that nonequilibrium is much more widespread than might be expected. This book is unique in focusing on nonequilibrium aspects of ecology, providing evidence for nonequilibrium and equilibrium in populations (and metapopulations), in extant communities and in ecological systems over evolutionary time, including nonequilibrium due to recent and present mass extinctions. The assumption that competition is of overriding importance is central to equilibrium ecology, and much space is devoted to its discussion. As communities of some taxa appear to be shaped more by competition than others, an attempt is made to find an explanation for these differences.

\$120 0-521-67455-7
2005 228 x 152 mm 272pp
53 line diagrams

- *Emphasis on nonequilibrium in nature*
- *Detailed discussions of equilibrium and nonequilibrium conditions in many animal and plant populations and communities, and of zoogeographical patterns*
- *A critical evaluation of evidence for interspecific competition*
- *A detailed discussion of latitudinal gradients in species diversity (why are there so many species in the tropics) and their causes*
- *A cutting edge account of major problems in ecology*

Chapters

Introduction; 1. Concepts and problems; 2. Nonequilibrium in communities; 3. Interspecific competition: definition and effects on species; 4. Interspecific competition: effects in communities and conclusion; 5. Non-competitive mechanisms responsible for niche restriction and segregation; 6. Patterns over evolutionary time, present mass-extinctions; 7. Some detailed examples at the population/metapopulation level; 8. Some detailed examples at the community level; 9. Some detailed biogeographical/macroecological patterns; 10. An autecological comparison: the ecology of aspidogastrea; 11. What explains the differences found? A summary, and prospects for an ecology of the future; acknowledgments; References.



See overleaf for chapters
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From page 14.....The combination of dangerous goods regulations, Canadian import regulations, AQIS forms, packaging and even obtaining the dry ice was quite an experience. The package eventually arrived in Ontario via Subic Bay, Freeport Philippines and Anchorage, Alaska USA. The exercise identified the lack of knowledge and experience with this type of procedure in the SA Government Veterinary Laboratory. It is expected that the private company, contracted as outsourcer of veterinary laboratory services, can deal with these sorts of issues.

A request to talk to year 11 agriculture science kids at the Kingston, SE school was accepted and the delights of collecting and examining ruminant parasites keep them somewhat attentive for an hour. Although Micko thought the group to be a little inattentive, the teacher explained that she thought he had more attention in the hour than she had anytime all year. These proceedings were coupled with a farmers meeting and evening BBQ, with Ian explaining the workings of the MLA prime lamb study and some results from the region. Of course, lamb was the meat of choice.

SARDI Diagnostics Waite Campus

The overwhelming highlight of the last few months for Nathan Bott has been attending SmP (see report), so as you might imagine life around the lab has been fairly mundane and steady-as-she-goes!

During March, SARDI Diagnostics welcomed Flinders University student, Anna Waller to the lab for 3 months. Anna has completed her Bachelor of Marine Biology, and is currently completing her dual degree of Bachelor of Innovation and Enterprise, which requires a 3-month work placement. Anna is keen on further study in Fish Health, so she has ended up under Nathan's supervision. Fortunately she knows the back end of a pipette from the pointy end and she is fitting in well to the happy family that is SARDI Diagnostics.

Nathan will also likely send her to Pt Lincoln some time soon to give Craig Hayward (UTas) a hand examining tuna and getting to see first hand the dynamics of the southern bluefin tuna industry.

Queensland News

CSIRO Livestock Industries, Brisbane

Michael Lees has started a PhD at CSIRO in Brisbane and will be looking at the role of oxygen radicals in the expulsion of gastrointestinal parasites from sheep. He has a team of supervisors, Andrew Kotze and Aaron Ingham in Brisbane, Susan McClure at CSIRO in Armidale, and David Piedrafita at Monash. He comes from a background in molecular plant development, so worms and sheep are quite new at the moment. Martin Lemmerer has also started a 4 month traineeship with Andrew Kotze. The traineeship is part of his studies for a biotechnology degree at the University of Applied Sciences of Weihenstephan, Germany. He will be looking at developing RNAi techniques with *Haemonchus contortus*.

Queensland Institute of Medical Research

Helminth Biology Laboratory:

News from Alex Loukas is that Mark Pearson was awarded his PhD in November 2005 - Thesis entitled "Identification, characterisation and vaccine efficacy of membrane proteins of *Schistosoma mansoni*". Mark is now working in the Loukas Lab on the hookworm vaccine project. Dr Danielle Smyth has also returned from Murray Selkirk's lab in London to work on the hookworm vaccine project. Ben Datu (PhD student) recently returned from a trip to Washington DC then Glasgow to learn gene knockout and introduction techniques for hookworms and *C. elegans* - the trip was funded by the ARC/NHMRC Parasitology Research Network and the University of Queensland.

Malaria Biology and Malaria and Scabies Laboratories: We have

said farewell to Paula Hawthorne who has moved from the Malaria Biology Lab to the Iron Metabolism Lab and hope that this is only a temporary absence from parasitology. Welcome to honours students Chris Peaty (UQ), Neil Raffelt (UQ) and Cassandra Lane (QUT). Chris is working on gametocytogenesis in *P. falciparum*, Neil on the aminopeptidase project and Cassandra on the serpins of scabies mites.

Also farewell to Tobi Spielmann who is heading off for a much deserved holiday before returning to Europe in order to take up a prestigious Alexander von Humboldt Fellowship in Germany.

Queensland Department of Primary Industries and Fisheries

DPI & F Molecular Bioscience Technologies (Vaccine Delivery Systems Group, QBP St. Lucia).

The sheep blowfly project is in its final stages before the current funding period ends in June this year. Rebecca Elkington, Merideth Humphries and Margaret Commins have been busy wrapping up experiments and finalizing data on the project funded by the Australian Sheep Industry CRC. The project has involved the characterization of an immunosuppressive protein produced by larvae of the sheep blowfly, *Lucilia cuprina* and has produced some interesting results and proposed many challenges. Merideth has been beavering away at isolating the gene while Rebecca has been nutting out how this protein suppresses the sheep's immune response. Marg is our protein girl and she's in charge of producing recombinant proteins and harvesting native protein. Rebecca will be presenting data from this project in Oslo, Norway in June when she attends the 4th International Veterinary Vaccines and Diagnostics Conference.

DPI&F Tick Fever Centre (Wacol)

Bert de Vos, long-time Centre Manager of the Tick Fever Centre will be enjoying long service leave from Easter until the end of the year and he will then return in a part-time role



as the Research Co-ordinator at TFC. Experimental work has finally begun to investigate tick resistance of cattle using microarrays and immunological techniques as part of the CRC for Beef Genetic Technologies. Emily Piper has begun her PhD studies as part of this project and will be supervised by Nick Jonsson (UQ) & Louise Jackson (QDPI&F). Taryn Fletcher and Louise Jackson are following up an interesting case of babesiosis in a Eastern grey kangaroo and would like to hear from anybody who has experience with similar cases. The attenuation of new *B. bovis* strains in calves for future vaccine use has been done along with assessing their capacity to protect cattle from virulent challenge. These 2 new *B. bovis* strains were highly protective and have been approved by the APVMA for use in cattle herds where vaccine breakdowns appear to a problem. Meanwhile, we recently made good use of the PCRs developed for the Tick Fever Centre by Ala Lew's group at ARI during an investigation into cattle deaths that the owner claimed were due to vaccine reactions. Using the genotyping PCR for *B. bovis* we were able to demonstrate that the *B. bovis* infecting the cattle was different from the *B. bovis* vaccine strain. We used this information to support the clinical data to show that the cattle were infected with a virulent strain of *B. bovis* just prior to vaccination.

Applied Animal Biotechnology Group (ARI, Yeerongpilly)

Experimental work has begun for the Beef CRC and we've been collecting ticks from an infested cow. Nick Jonsson (UQ) has been collecting skin hole punches for our experiments and Ala learnt that Mortein surface spray is the recommended product to protect lesions on cattle from attracting flies. Tick sequence analyses have begun through CRC PhD student (Sebastian Kurscheid) at the Centre for Bioinformatics and Biological Computing with Prof Matthew Bellgard (Murdoch Univer-

sity) and collaboration with USDA. Bronwyn Venus has been finishing up Neospora work following the departure of Doroth Loo (Griffith University). Cathy Minchin has been setting up cell culture protocols to study tick gene function. Wayne Jorgensen is still going to lots of meetings and gets to go to BIO2006 in the USA next week. He has helped us to differentiate tick stages in between his meeting timetable. Melanie Jenner and Anthea Bruyeres have been busy with *Eimeria* challenge experiments and Jess Morgan has been developing new real time assays for chicken *Eimeria* species. Jess has also started to look at molecular markers to differentiate screw worm fly and related species. Con Constantinou (UQ post-doc with Glen Coleman, Vet School) is continuing to investigate antibody responses to different life-cycle stages of several strains of *Eimeria*.

ACT News

Two new Honours students have joined the Behm lab. Laura Wise's research project is investigating the functions of two nematode-specific genes in *C. elegans*, and Fay Khaw is studying the responses of *C. elegans* to bacterial quorum-sensing molecules.

In March, Carol attended a meeting at the University of Tokyo, organised by WHO/TDR and the Parasitology Society of Japan, entitled 'Informal Consultation Meeting of Experts to advise TDR on the Proposed Helminth Initiative to enhance R & D for new products'. The meeting was attended by about 35 scientists from around the world, including researchers, scientists from the pharmaceutical industry, from biotech companies and from granting agencies who joined with staff from TDR to discuss a proposed initiative to boost our capacity to identify, produce and develop new drugs for filarial and schistosome infections. The meeting was chaired by Dr Graham Mitchell and the discussions

provided a framework for TDR to proceed with raising seed funding to undertake more detailed planning for the Helminth Initiative.

NSW News

Institute for the Biotechnology of Infectious Diseases

In mid-February, after years of talk, we moved to our new home on the Broadway campus of UTS. We are now located in a new part of Building 4 on the corner of Thomas and Harris Streets. As with all new buildings there are a few teething problems but we are settling in well. We are enjoying our new surroundings especially the discovery that buying lunch doesn't involve heated lettuce anymore. Our PhD students have been taking themselves away from the chaos lately – Rob Walker has just returned from a few weeks in Brisbane with Mal Jones at QIMR learning Laser Microdissection and Pressure Catapulting. Rob is looking at sexual stages of *Eimeria* and this technique has proved very useful for identifying and separating out microgametes. Just as Rob returned to Sydney, Eithne Cunningham set off for Brisbane to work with Don Gardiner and Katherine Trenholme on proteases of *Plasmodium*. Sarah Flowers has just jetted off for a year at the Rockefeller Institute in New York. Sarah will be working with Professor Brian Chait on a proteomics project on apicomplexan oocyst and cyst wall proteins. Rob and Sarah were both awarded travel fellowships from the ARC/NH&MRC Research Network for Parasitology to help with expenses. Sabina Belli and Jan Slapeta travelled to Melbourne to attend the ARC/NH&MRC Research Network for Parasitology sponsored Symposium on Malaria Protein Structure and Function at WEHI in February. Congratulations to our lab manager, Michael Johnson, who submitted his PhD thesis in January. Mike started a part time PhD with Alan Johnson on *Toxoplasma* in 1997 and has done a great job persevering despite ever



increasing demands on him as the former Molecular Parasitology Unit became IBID and expanded, our move approached and a change of supervisors to Kate Miller after Alan moved to the ARC. Impending fatherhood may also have helped him focus! We would also like to congratulate Nicky Boulter on her selection in the NSW Premier women's dragon boat crew. Nicky will compete in the National titles to be held at Lake Nagambie in Victoria on April 14th and we wish her every success.

Macquarie University

Environmental Microbiology CRC

The Macquarie arm of the EBCRC has exploded in numbers recently with the addition a visiting professor from Korea, In Kim, and his PhD student. In Kim and student are here to further develop novel strategies for detection of environmental pathogens. Quach Truong and Kate Stoner recently attended the Young Water Professionals conference held in Sydney. Quach's poster on *Cryptosporidium* proteomics was awarded the best poster prize which further added to his recent achievement on getting his first publication accepted in IJP. Belinda Ferrari is off to the American Society for Microbiology meeting in May where she will report on applications of quantum dots to *Cryptosporidium* and *Giardia* detection, while others in the group are looking forward to ASP.

Anitha Alagappan attended a FISH workshop at Queensland University where she gained valuable information to help her with improve the method for *Cryptosporidium* and *Giardia*. Michelle Power recently joined the group to investigate novel methods for protozoan detection. However Michelle is soon to move onto a Research Fellow position within the Marsupial Immunology Laboratory which will not only enable her to pursue her interests in marsupial parasitology but to also expand parasitology within the Biology department. Michelle will con-

tinue to collaborate with the CRC. Michelle recently attended an evening of *Leishmania* talks organized by Damien Stark of St Vincents hospital. Michelle said the event was well worth attending and that Damien has plans for future similar events.

Marsupial Immunology Laboratory

Inger Vilcins continues her studies investigating pathogens in ticks. Inger is currently looking at the prevalence of haemagregarine parasites in ticks which infest NT reptiles including monitors and water pythons. Inger will be concentrating on hepatozoons and other tick-borne pathogens. Inger will be presenting her work on spotted quoll ectoparasites at the quoll biology and management meeting which is part of the NSW DEC Biodiversity and Conservation Science Seminar Series. Nichola Hill continues to investigate pathogens in possums and is currently working up molecular techniques for direct detection of target protozoan species in faecal samples. Michelle Power will soon be joining the Marsupial Immunology group as Research Fellow / Laboratory Manager. With the emergence of protozoa in the immunology lab we may have to start thing of incorporating 'parasitology' in there somewhere.

University of Sydney Faculty of Veterinary Science

There has been a lot of movement within the Vet Science Parasitology group. In January Michelle Power made a move to Macquarie University after her MLA/AWI funding finished. Michelle's project pioneered new techniques for studying nematode parasites and has built a foundation for RNAi and cell culture in these organisms. Nick Sangster's role as Editor of IJP draws to a close, Maria Meulamann has packed up the IJP office (and her home) and moved to Melbourne. Maria has now set up the office at WEHI (Bundoora). Nick is on a three month sabbatical which currently

has him also at WEHI learning bio-informatics techniques to enable him to annotate the *Haemonchus* genome. He is also spending time at CSIRO Livestock Industries doing bovine/ovine microarray analysis in the Sheep Genomics program. Nick will then spend some time in Glasgow where he will continue the annotation with a team there. His time in Glasgow will also lead into ICOPA. This has been supported by the ARC/NHMRC Parasitology Network with a view to sharing technologies and expertise between research groups.

Nick is also preparing for a move in September to Wagga where he will take a Chair of Vet Pathobiology within the developing Vet Faculty at Charles Sturt University. The new vet school will focus on students from rural backgrounds. Nicks aims to help develop problem a based learning curriculum and continue research in sheep parasitology and envisages the school becoming an important centre for rural veterinary research and disease diagnosis. Nick is also looking forward to moving on from the IJP in April and catching up on all the things that have slipped by in the last 3 years. Abdullah Al'Anazi from Saudi Arabia has started a PhD on horse parasites. Abdullah will continue working with Nick and will alternate between Wagga and Saudi Arabia.

Kate McMaster is at the final stages of writing her Masters. Kate has applied her sheep and laboratory skills to investigating the immune response in sheep infected with *Haemonchis contortus* and is now planning her future. Michelle Power returned to the Vet school for the undergraduate awards night to present the ASP sponsored prize for high achievement in Veterinary Parasitology. Congratulations to Amrita Grewal, Karen Kuwahata, Erin Kefford and Leanne Huynh who were awarded the prize.

St Vincent Hospital

On the 2nd of February, St. Vin-



cent's held a joint Australian Society for Microbiology SIG (Parasitology) and Australian Society for Parasitology meeting titled Leishmaniasis: an Australian perspective. The evening was attended by 34 people. Presenters included Prof John Ellis from UTS who provided an overview on *Leishmania*. John's talk was followed by two very interesting clinical cases from Prof Debbie Marriott (St. Vincent's) and Dr Pam Konecny (St George Hospital). The talks then shifted to diagnoses with Dr Damien Stark discussing applications of molecular techniques for laboratory diagnosis and parasite speciation. Dr Rajasekariah from Cellabs then discussed the development of ELISAs for immunodiagnosis of leishmaniasis in humans and canines. The highlight of the evening was a very informative presentation by Dr Karrie Rose (Australian Registry of Wildlife Health) who presented findings on *Leishmania* in red kangaroos from the Northern Territory. Karrie also discussed the public health implications of this novel *Leishmania* isolate and their continuing investigations in the search for a vector. Damien Stark has planned future events for joint meetings with the ASP and the NSW branch of the Australian Society of Tropical Medicine.

WA News

Murdoch University

Due to unforeseen circumstances (Mal failed to receive any emails sent to him from a dodgy internet café in Calcutta!) (*my email system now helpfully recognizes Rebecca as a potential spammer and routinely deletes her emails-Ed!*), the last newsletter for WA was rather short. So this time around, we have compiled a rather substantial one! Here goes....

Apart from Viagra's typical indication of enhancing one's love life and the ever important male ego, Viagra

has now also found its niche in clinical veterinary parasitology! Associate Professor in Small Animal Medicine, Dr Peter Irwin and his team at the Murdoch University Small Animal Hospital surgically removed 35 adult heartworms from a dog in caval syndrome. The dog was then treated with Viagra (among other medications), as Sildenafil, the active compound in Viagra, is indicated as a treatment for pulmonary hypertension, which is the serious haemodynamic disturbance in heartworm disease. The dog survived and is doing well!

We have had a host of visitors from all around the globe in the last 6 months. Miss Chantira Sutthikornchai (a.k.a. "Nook") from the Faculty of Tropical Medicine, Mahidol University visited our department from August to October last year and furthered her experience on molecular techniques for the characterization of *Giardia duodenalis* under the supervision of Rebecca. She was kept company by her colleague Dr Jitbanjong Toomphong (a.k.a. "Pla"), who spent nine months at Murdoch as part of her current PhD studies on the epidemiology of *Toxoplasma gondii* in livestock in Thailand, under the supervision of Andy and Ryan. Wendela Wapenaar from the Veterinary School at Prince Edward Island in Canada also visited Murdoch for a 3 week period in November 2005 to catch up with her supervisor Ryan. Ryan's student Melvin Deboor from the Vet School in Utrecht also visited us for 3 months to work on *Neospora*. Rune Stensvold, from the Laboratory of Parasitology, State Serum Institute in Copenhagen is nearing the end of his productive three month visit. Rune has been working hard at characterising *Blastocystis* isolates recovered from over 120 symptomatic patients in Denmark under the supervision of Andy and Rebecca. Rune will be remembered for his fine taste in beer and wine, for introducing the group to Danish Shnapps and his excellent ten-pin-bowling skills (he

said he was a beginner, but went on to shame us all! That's a "no go" with a broad Aussie accent!!). We have also recently fare-welled Lydden Polley and John Barta. We thoroughly enjoyed their stimulating company and know they enjoyed the delights of the 'south-west'. Lydden got us on-track with some new ideas for on-line teaching, and John's flossing on the beach provided more clues in the form of gregarines from marine polychaetes to question *Cryptosporidium*'s affiliations.

We have had a number of post-graduate student completions and start-ups recently. Unaiza Parkar recently completed a successful honours thesis on the molecular characterization and zoonotic potential of *Blastocystis hominis* recovered from humans and a range of Australian native, captive and domestic animals under the guidance of Andy and Rebecca. Unaiza has just been awarded a Partner PhD Scholarship by the WA Department of Conservation and Land Management and Murdoch University, to continue her research with *Blastocystis* and other gastrointestinal parasites of native wildlife. Unaiza will also be utilizing new techniques such as pyrosequencing, for high throughput detection and diagnosis of parasites in wildlife. Nevi (working on her PhD on the transmission of *Toxoplasma* in native wildlife with Andy and Ryan) and Unaiza have already ventured on their first field trip collecting Woylie and other small marsupial poop in Manjimup with the help of CALM. Part of this project deals with the recent problem of die-offs in the Woylies - could it be Toxoplasmosis? Difficult to pass up a great opportunity to undertake a full parasite screen of the mammals that will be trapped! Clare McKay also successfully completed her honours thesis on conventional and molecular-based diagnosis of haemo-parasitic vector-borne infections among Thai temple dogs under the guidance of Peter Irwin, Una Ryan and Rebecca. Clare recently secured a position in



our clinical pathology department and continues to be amazed by the resemblance of Raspberry jam to an embolus! Hanna Borowski, originally from Germany has just started her PhD with Andy and Wayne Best looking at the mode of action of novel anti-cryptosporidial agents. Natalie Giles has successfully obtained her PhD entitled "Exploitation of the protein tubulins for controlling African trypanosomiasis". Nat has moved on to bigger things and is now working with "Australian of the Year" Fiona Woods on new therapies to treat skin burns. We wish her well on the fast track. Jill Austen has emerged from her BSc Honours program with a first class award and almost enough information to give a name to a new trypanosome species that is present in several small furry marsupials in the Southwest of WA. Jill started her PhD with Simon to continue this work in February however, she managed to get pregnant sometime around Christmas and will need some time off to look after her own small furry creature. Celia Smuts continues to work hard under Simon's guidance to develop a paper-based serum collection system as part of her PhD. Once she finishes that she has the simple task of making a few recombinant proteins for an Ab-ELISA to detect *T. evansi* infection. Welcome to our new research assistant Gabby Devlin, Jack of all trades and soon to be Master of them all too! Gabby has a background in molecular biology and has taken up the challenging task of becoming a "real" parasitologist by training under the guidance of Aileen and Tanya on faecal parasite identification techniques and *in vitro* and *in vivo* work.

Simon Reid has started a new project funded by the Biosecurity CRC in collaboration with Lee Skerratt (JCU). The project aims to develop tools to improve the surveillance for surra and will involve research on the vectorial capacity of Australian tabanids and the development of predictive models for the spread and

outcome of surra. The good news for us is that Rob Dobson has agreed to take on the task of developing the models for this project, which officially began in March. The start of this project heralds the official launch of the Biosecurity Research group at Murdoch, which also includes willing collaborators Ian Robertson, Stan Fenwick, Trevor Ellis and John Edwards. We now have a diverse range of students from nearly every SE Asian country and projects ranging from the epidemiology of tick-borne rickettsia, the epidemiology and control of avian influenza to surveillance for FMD.

Rebecca Traub was an invited speaker at the Indian Association of Veterinary Public Health Specialists and National seminar on "Newer Strategies for the Diagnosis and Control of Zoonoses" from November 11th -12th in Meghalaya, India. Immediately after this Rebecca hopped to Kolkata, Mumbai, Pune, Chennai and Delhi in aim of improving relations and collaborations between the School of Veterinary and Biomedical Sciences at Murdoch and a number of veterinary, biomedical, industrial and government-based institutions in India. Rebecca also joined Andy in Bangkok for the annual Joint International Tropical Medicine Meeting from 30th Nov – 2nd Dec where Andy was an invited speaker. Prior to this, Andy traveled to Hanoi with our current collaborators from the Faculty of Tropical Medicine, Mahidol University, to extend our current research [funded by an ARC-Linkage (Bayer Animal Health, Leverkusen) grant] studying the epidemiology of canine gastrointestinal parasitic zoonoses in various community settings in Thailand, into Vietnam. The project will focus on the role of dogs as reservoirs for the zoonotic hookworm *A. ceylanicum* and the liver (*Opisthorchis*, *Clonorchis*) and the minute intestinal flukes with emphasis on molecular diagnosis of infection in human and canine definitive hosts.

Andy Thompson recently returned from a short visit to Germany and Austria where he met with collaborators Norbert Mencke at Bayer Animal Health Division, Christian Epe and Georg von Samson-Himmelstjerna at the Veterinary School at Hannover and Kurt Pfister in Munich. Soon after, Andy traveled to Vienna where he was an invited speaker at the German Society for Parasitology meeting. Andy was impressed with the society's "pre-conference meeting" for PhD students which served as an "ice-breaker" for them. During this time students were given the opportunity to introduce and present their research to each other which allowed them to gain experience and confidence in an excellent social environment.

Caroline and her hubby Andrew's wild month-long trip to Egypt, Sudan, Somalia and Ethiopia over the Christmas break sets a perfect tone to wrap this newsletter up. Included are snippets of their experiences! "Getaway" eat your heart out!

Red Tape

"The Sudanese embassy kept stopping to pray and the Ethiopian embassy had moved. No one really knew where!"

Touring

"Saw Morgan Freeman at Giza in the second pyramid"

"Took a train to Luxor, went to the west bank and hired bikes to visit the Valley of the Kings and the Ramasseum and the endless Temples, got a flat tyre and Andrew dinkied me for the arvo."

"Hired a 4 wheel drive and travelled south of Addis Ababa with a driver who couldn't speak English to a National Park with no trees or many animals, just farmers and poachers."

Traveling

"Spent Andrew's Birthday on the train in a carriage shared with a blind man, a Khartoum lawyer, Uncle 'Pharook', a Nubian butcher and



a teenage boy. The blind man spoke English. We all slept in the same room, very cozy."

Wining and dining

"Managed to smuggle a single can of Sakara into Sudan"

"Made it to Khartoum the capital and had pizza and television, no beer."

Socialising

"Spent a couple of days (in Ethiopia or "beer country") doing washing and making friends, then realised that all our 'friends' were prostitutes, but they were still ok, it's an acceptable profession in Ethiopia."

Department of Agriculture WA

The comparatively cool and moist summer in WA – good for sheep worms, bad for sheep – has brought forth cases of severe anthelmintic resistance, including moxidectin failure. This highlights the need for changes to the traditional approaches to strategic drenching programs, and after several years of research by firstly Brown Besier, and more recently, Rob Woodgate, we are confident in our new and more sustainable versions of "summer drenching". Hence, our sheep worm control efforts will move to a heavier extension phase this year, as we roll out the new ideas to sheep farmers. It's a bit easier with Rob taking the reins as national manager of the WormBoss worm control website from QDPIF's Arthur le Feuvre, after Arthur "retired". Brown Besier has also been busy in the mires of Sheep CRC research administration, especially regarding the bid for a second term of the CRC – a parasitology element has been included in the submission, with the ethos of reducing chemical use in the sheep industry. Although now a dated news item, our thanks to the organizers of the WAAVP conference in Christchurch should be recorded - Antipodean parasitology impressed people a lot of from afar. We appreciated the decision of 2 of them to travel back via WA: Ray Kaplan (University of Georgia vet-

erinary faculty) and John Huntley (Moredun Research Institute in Edinburgh) spent a few days visiting various local institutions. Meanwhile, the continued existence of *Neospora* is under threat, as the combined team of Dieter Palmer (Animal Health Laboratories, South Perth) and Una Ryan and Ryan O'Handley at Murdoch starts an attack – in this case with a project funded by the WA cattle industry to develop new testing tools.

NT News

Menzies School of Health Research

Congratulations to Kate Mounsey for her success at winning the 2006 Northern Territory Young Achiever Award. Kate was awarded the Science and Engineering Award for her PhD studies on emerging drug resistance in scabies mites. Kate who has only recently returned from her ARC/NHMRC Research Network for Parasitology funded trip to McGill University in Canada

was obviously delighted and needless to say everyone in the Scabies and Skin Pathogen Research Lab at Menzies had a very enjoyable evening drinking and eating at the Awards Night.

We also welcome Annette Dougall to the challenging life of a PhD student in the Scabies Lab. Annette will be starting on the *Leishmania* life cycle investigation project mid year. We are particularly looking forward to a visit by Dr Bruce Alexander from the Liverpool School of Tropical Medicine, UK. Bruce, whose visit is funded by The Royal Society, will provide expert advice on sampling for phlebotomine sand fly fauna and assist in identifying species that may act as vectors of *Leishmania* in northern Australia.

DOCTOR FUN



The social life of ticks

22 January 96

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Welcome to new Network staff member

Welcome to the newest member of the ARC/NHMRC Research Network for Parasitology team, Carly Johnson, who will be working with Lisa on the communication and public relations activities of the Network. Carly is about to complete a Bachelor of Business (Public Relations and Management) from QUT and will be based at QIMR in Brisbane.



Grants, awards and prizes Professor Leann Tilley receives an ARC LIEF grant

Prof. Leann Tilley, La Trobe University, is part of a successful ARC LIEF grant with Frances Separovic (Melb Uni) and Mibel Aguilar (Monash Uni) and Andrew Clayton (Ludwig Institute). The La Trobe component will enable the purchase of a Fluorescence Correlation Spectroscopy Microscope to measure the dynamics of cellular proteins.

Dr Tina Skinner-Adams receives a grant from the Clive and Vera Ramaciotti Foundation

Congratulations to Dr Tina Skinner-Adams of the Malaria Biology Laboratory at QIMR who was awarded a grant from the Clive and Vera Ramaciotti Foundation for "Antiretroviral Protease Inhibitors: Investigating a novel group of anti-malarial agents."

Grant success from the Drugs for Neglected Diseases Initiative (DNDi)

Congratulations to Andy Thompson, Wayne Best, John Horton and Collette Sims (Murdoch University) and Bill Charman (Monash University) and Reto Brun (Swiss Tropical Institute) on the award of a grant from the Drugs for Neglected Diseases Initiative (DNDi) for a project entitled, "Novel, Orally Available Drug Candidates for Trypanosome Infections."

DEST Endeavour Scholarship for Eithne Cunningham

Eithne Cunningham, a PhD student from the Department of Microbiology, Trinity College Dublin, Ireland, was awarded a one-year DEST Endeavour Scholarship to work in the laboratory of Prof. John P. Dalton, Institute for the Biotechnology of Infectious Diseases, University of Technology, Sydney on 'Leucine aminopeptidases of *Plasmodium falciparum*'.

Network IT program update

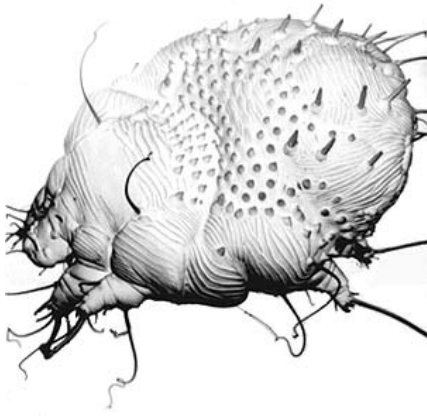
On 19 December 2005 a University

of Technology Sydney (UTS) contingent travelled to Monash University, Melbourne, to meet with the Chair of the IT Working Party for the ARC/NHMRC Network for Parasitology, Professor Ross Coppel, to discuss UTS' role in supporting IT for parasitology researchers in Australia. In attendance at the meeting, from UTS, was Dr Tim Langtry, Director of the Computational Support Research Unit (CSRU), Mr Anthony Maher, Data Grid Specialist, Ms Ayesha Fernando, Application Support Specialist in Bioinformatics and Dr Sabina Belli, Senior Research Fellow in Parasitology, Institute for the Biotechnology of Infectious Diseases (IBID). Monash University representatives included Dr Torsten Seemann, Research Fellow in Bioinformatics, and Dr David Powell, Research Scientist in Bioinformatics, who are also members of the Victorian Bioinformatics Consortium (VBC), as well as Professor Ross Coppel, the Director of the VBC.

The CSRU is a member of the Australian Partnership for Advanced Computing (APAC) Grid Program, and the goal of the Program is to provide computing support to coordinated programs in research, education and technology. These goals are in-line with the Parasitology Network's IT program of providing computing and IT support to discovery in areas of research that have reached a bottleneck, as well as to create a web-based comprehensive resource for Parasitology Network members.

The priority for CSRU for 2006 will be to build a user-friendly, virtual organisation platform that is web-based and searchable, and that provides a comprehensive resource for access to parasite databases, parasite genomes, bioinformatic analysis tools, as well as parasitology resources and protocols.





News stories from Network scientists

Knocking out malaria **13 March 2006**

Removing a single gene from the malaria parasite could prevent the most severe forms of the disease and save millions of lives, a Monash University team has found.

Dr Brian Cooke and his team from the Department of Microbiology at Monash University found that by "knocking out" the SBP1 (skeleton binding protein-1) gene from the malaria parasite, infected red blood cells could no longer stick to the inside of blood vessels and block blood flow in vital organs, causing severe disease and, frequently, death.

The team is now trying to develop a drug that could target the protein. Its research findings are published today in the *Journal of Cell Biology*.

There are four malaria parasites that infect humans but only one is particularly deadly – the *Plasmodium falciparum*. The parasite, injected into the bloodstream by mosquito bites, enters and grows inside red blood cells.

Once in the cells, the parasite sends proteins throughout the blood cells via membrane structures known as Maurer's clefts. These clefts dock under the surface of a red cell's outer membrane and deposit a parasite protein called PfEMP1 onto the cell's surface, enabling it to anchor to the inside of blood vessels.

Generally this docking occurs in major organs such as the heart, lung, kidney, brain, or the placenta of pregnant women. The infected cells build up and block blood flow to the organs, frequently resulting in rapid death.

"The SBP1 gene acts as a kind of 'chauffeur', which ferries PfEMP1 onto the red cell surface," Dr Cooke said. "Without the chauffeur, PfEMP1 could not get out of the red blood cell and could not anchor to blood vessels so severe forms of the disease are unlikely to develop."

Vaccine for malaria **27 February 2006**

Queensland Institute of Medical Research (QIMR) scientists have found that that, in animal studies, an immune response can protect against infections of different strains of the malaria parasite. Malaria vaccine trials in humans are expected to start in Brisbane later this year.

Professor Michael Good from QIMR talks to Carly Johnson about the malaria vaccine trials.

How does this vaccine work?

"The vaccine works by stimulating an immune response that recognises the infection, the real infection when it comes, and destroys it or limits its growth. The real challenge in malaria vaccines is to identify a way to stimulate an immune response which will cover all strains of the parasite and be effective in controlling their growth. Most people are looking at what are called single antigen or subunit vaccines. The difficulties with these approaches are that single antigens are often poorly immunogenic and secondly they're often polymorphic. In other words, the parasite changes its coat.

The approach that we've been pursuing recently is to revisit ways to use the whole parasite. The whole parasite contains all the proteins of the parasite so you limit problems of antigenic variability and typically

it's more immunogenic. What we've found is if we use a low dose of the parasite, as opposed to say a large dose, the immune response is even more immunogenic again. It's focused on cell mediated immunity in preference to an antibody focus. Now, that's important because we find that the target antigens in cell mediated immunity are highly conserved where as the target antigens of the antibody are the ones that tend to be polymorphic."

How is this vaccination different from the traditional approach to malaria treatment?

"Malaria treatment is to kill the parasite with a drug once it's in your body and that doesn't in itself induce an immune response which will protect you against subsequent infection. In fact, there's a lot of evidence that when you have a malaria infection your immune response to the parasite is diminished. The infection causes apoptosis of the specific T-cells and memory B-cells and that limits your ability to respond effectively to the parasite next time. So a vaccine, unlike a treatment, aims to stimulate the immune response, rev it up so that the antibody, or the T-cells in our case, will kill the parasite."

How was the idea for the "whole parasite approach" developed?

"We found out that when you get a malaria infection in an animal model the T-cells which were responding to that parasite were apoptosed. The parasite was causing cell death of the T-cells which were supposed to kill the parasite. So we thought that since apoptosis is often associated with a high dose of antigen or parasite that maybe a low dose would prevent apoptosis. We tried a very low dose, so low that you couldn't see the parasites in a blood infection, and we found that that was successful. It didn't cause apoptosis and it stimulated a very potent immune response."

How long has it taken to get to



this stage?

"We've been working on this low dose approach for about 7 to 8 years."

How many scientists have been working on this vaccine?

"Not a great number. We've had a student from Thailand (Chakrit Hirunpetcharat), post docs Huji Xu, David Pombo, Salenna Elliott and Alberto Pinzon-Charron. Some research assistants in the lab (Virginia McPhun, Xue Qin Liu). Some are still here, others have come and gone."

What challenges did you face using this approach?

"The biggest challenge in this approach I think is the idea of convincing people that we can make a safe vaccine when you inject whole organisms grown in red blood cells. People are understandably concerned about inducing immune responses to the red blood cells. We have to go to extraordinary lengths to make sure that doesn't happen, and to make sure that the blood that we culture the parasites in isn't infected with other organisms such as viruses. We have to make sure the blood product is safe."

How is this vaccine different from the one that Dr Stephen Hoffmann in the US is producing?

"He and his company Sanaria are looking at a different stage in the lifecycle. The malaria lifecycle starts when the mosquito injects the sporozoites which travel to the liver, then leave the liver and go into the red blood cells. The red blood cells are responsible for all the symptoms and pathology of malaria. Our approach is focused on the red blood cells stage. Steve Hoffman's is focused on the sporozoites that come from the mosquito to the liver."

How will this vaccine be taken?

"We anticipate it will be given by intramuscular injection."

Is this vaccine suitable for children?

"We would hope so. One of the important parts of doing any vaccine trial is to look at safety and immunogenicity. As part of the vaccine trial work up we would be looking initially at safety and immunogenicity initially in adults, and then if it was safe and immunogenic in adults we would look at children."

What are the dangers of vaccinating people with live parasites?

"We probably won't use live parasites. We will use whole parasites which have been killed. With live parasites obviously you would have to be sure they were attenuated and weren't in themselves able to cause disease which is a big problem. But with a dead parasite that won't be an issue."

How stable is the vaccine and what is its shelf life?

"Until we actually test that, we don't know. These are questions we don't have answers for yet."

What sort of issues might there be for using this vaccine in other countries?

"The main ones are showing immunogenicity in different populations and issues of shelf life."

Can you tell us about the human trials process and describe what happens next?

"It's anticipated that human trials should start in about a years time. After that, the next thing to do is grow the *Plasmodium falciparum* parasites at GMP cells. Obviously we do grow *Plasmodium falciparum* parasites now, but we don't grow them in a way that would be regulated or allowed by the TGA to inject into people. We would have to use blood which we know is safe and clean and we have to grow these parasites under very stringent, reproducible conditions so that we can do the same thing again and

again and again. And we have to produce the adjuvant at GMP."

What is the significance of this vaccine in the fight against malaria?

"There are about 2 million deaths every year from malaria, most are children and mostly in Africa. Any vaccine which could diminish that number would have a big impact on public health."

What is the vision for the development and distribution of this vaccine?

"If this vaccine works as we hope it will, it may be that these processes could be taken up by companies in developing countries around the world and made locally."

What about the future of this vaccine?

"What excites me most is to find a way to get this vaccine, if it works, distributed. So whatever it takes."

Carly Johnson interviewed Professor Michael Good, QIMR, 27 February 2006.



Annual Report

The Annual Report for the ARC/NHMRC Research Network for Parasitology is available on the website at:

<http://www.parasite.org.au/arcnet/news.shtml#2005AnnReport>



Nominations for Bancroft-Mackerras Medal

The Bancroft-Mackerras Medal may be awarded to a member of the Society who, in the opinion of the selection committee, has made an outstanding contribution to the science of parasitology, particularly in work published during the last five years.

Nominations should be made by a proposer and seconder, and should consist of:

- A detailed statement of nomination describing the nature of the "outstanding contribution to the science of parasitology" for which he/she has been responsible. The statement should be signed by the proposer and seconder, or each may submit a separate statement.
- A *curriculum vitae* including a list of all publications.

Note that the Medal is intended for members whose research program has been productive during the last five years. The permission of the nominee is not required and the nominee need not be aware of the nomination.

Nominations should be sent direct to the current ASP President. Detailed information on nomination and selection procedures is given in the By-Laws of the ASP Constitution. Nominations are due each year on December 31st.

Nominations for ASP Invited Lectureship Travel Grants

To complement the scientific presentations at the Scientific Meetings of the ASP, overseas researchers of international reputation in a field of parasitology may be invited to attend and present their work. The invited speaker's expertise must be common to a discipline or symposium conducted at the Scientific Meeting. The visitor must be nominated by a member of the Society.

The Society will provide a travel grant to

assist in the finance of the trip. The support will be based on an economy class direct return airfare from the recipient's home city to Australia, the necessary interstate travel and reasonable living expenses based on actual costs. Registration at the Scientific Meeting will also be included.

The total value of the lectureship will be determined by Council but it is expected that the recipient, or his/her Australian sponsor, will also seek to provide additional or alternative financial support.

Applicants must include the following information:

Details of visiting specialist

An up-to-date *curriculum vitae* must be attached to the application. The following details should be supplied:

- Date and place of birth
- Present nationality (and former nationality, if applicable)
- Present position held
- Full address of employing institution, including phone, fax and Email numbers
- Detailed evidence of expertise in relevant discipline (list of publications, etc.).

Details of Australian nominator

- Name of member organizing the visit, including full address, phone, fax and Email numbers
- Details of all other applications which have been made for financial assistance towards travel/accommodation costs. Total value of other contributions must be included.

Details of program

The program should normally last a minimum of 2 working weeks and cover at least 2 States or Territories. Details should include:

- Date of visit
- Program being arranged, including institutions to be visited (with dates) and the purpose of each visit (lecture, seminar, workshop, research discussion, etc)
- Aims, rationale and likely benefits of visit
- Contribution to be made at Society's Scientific Meeting

Applications plus supporting documentation should be sent to the ASP President by the end of December in the year preceding the Conference. Applicants should check with the Conference Organisers for details of

conference theme, symposia, workshops, etc. before submitting an application.

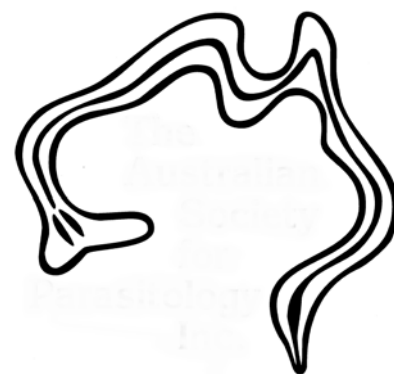
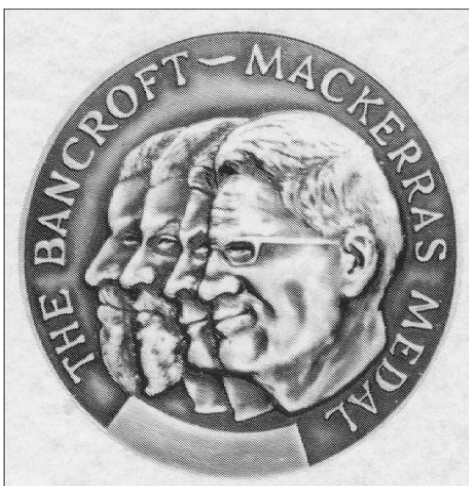
JD Smyth Travel Awards

These awards are specifically designed to assist postgraduate students travel internationally to conduct research and/or to present their research at international conferences. Applicants must be members of the ASP Inc. of at least 6 months standing and enrolled in a postgraduate degree at an Australian university.

Four scholarships will be awarded each year and applications will be considered in two rounds with closing dates in June and December of the preceding year. Each scholarship will be up to the value of, but not exceeding, \$A2000. For research-based proposals, applicants should nominate the international laboratory they intend to visit, the purpose of the visit and the time frame. A short, abstract-length (approximately 250 words) proposal of the techniques and skills to be gained should be attached.

For travel that primarily involves attendance at a conference, applicants must nominate the conference, supply an abstract and justify their attendance at a recognised international conference preferably though not exclusively held outside of the Australasian region.

The award will only be made once proof is received of acceptance of the abstract by the conference organisers. If the student does not attend the conference the ASP funds must be returned to the Society. On return from the Conference a short report must be written to the Council detailing the student's experiences. Applicants should apply to the current ASP Secretary giving details of the conference, their research and supervisor's support plus an abbreviated c.v. and conference abstract, as outlined on the accompanying application form. The application must not number more than 6 pages including the c.v. and abstract. Applications must be received by the next due dates of June 30th or December 31st each year.



Application form for JD SMYTH Travel Award

Name:

Address:

.....

Phone: Fax:

Email:

University:

Enrolled Degree:

Supervisor's Certification

I hereby affirm that the above-named person is a bona fide postgraduate student under my supervision.

Signed: Date:

Laboratory Details (for research applications)

Laboratory to be visited

Address

.....

Purpose of Visit

.....

.....

Conference Details (for applications to attend conferences)

Conference Title:

Venue:

Conference Address:

Title of Abstract (*Please attach a copy of the abstract*):

.....

.....

Author(s)

Awards will only be paid on receipt of proof that the abstract has been accepted.

**For all applications: Attach statement justifying attendance, budget (include all other support), brief curriculum vitae
[application not to exceed 6 pages]**



Parasitology Conferences

ICOPA XI, Glasgow, Sunday 6th August to Friday 11th August 2006, website: <http://www.icopaxi.org/>

Third International Congress on Phthiraptera, Buenos Aires, Argentina, 16 - 21 October, 2006, Website: <http://www.phthiraptera.org/>.

Australian Society for Parasitology 2007, Canberra, July 2007.

Royal Society of Tropical Medicine and Hygiene Centenary Conference, 13-15 September 2007 at the Queen Elizabeth II Conference Centre, London, UK.

Book Review

David, T. John & William A. Petri Jr, Mark and Voge's Medical Parasitology, 9th Edition, Saunders (Elsevier). ISBN:0721647936, 2006., RRP: \$95 (Au)

A few years back I was asked to give deliver a series of lectures in Medical Parasitology to Biology students at a Brisbane university. I had never taught medical parasitology before, and somewhat daunted by the prospect of teaching about organisms I had mostly forgotten, I scanned the bookshelves of the biology library for a parasitological text that had the right mix of parasitological information and excellent images of life cycles, parasites and their host interactions. While I never found the volume that had all I desired, I was impressed by the quality of the book I know call "Markel and Voge." I made great use of this book in the ensuing weeks.

Just a short while ago, the latest edition of "Markel and Voge" landed across my desk. This ninth edition continues the high quality of the earlier versions, which began as *Diagnostic Medical Parasitology*, written in the late 1950's by Edward Markell and Marietta Voge. The book retains the compact form of earlier editions, with 16 chapters describ-

ing general features of parasites, symptoms and pathogenesis, diagnosis, epidemiology, treatment and control. The consideration of human parasites is extensive and comprehensive, and even rare parasites, such as *Diplogonoporus* (a pseudophyllidean cestode contracted by eating raw anchovies or sardines in Japan) are mentioned.

Parasite life cycles are given in a simple and graphic form, with emphasis on means of human infection, rather than parasite development. In keeping with this focus, the authors have shied away from a strict taxonomic approach in considering parasites. The protozoans, for example, are presented on the basis of tissue tropism rather than taxonomic affiliations.

The book gives information on worldwide prevalence of the most important human parasites, descriptions of the parasites that are problematic for immuno-compromised patients and methods for microscopic and immunologic diagnosis of parasites. There is even a

chapter that deals specifically with arthropods and human disease and covers all sorts of insect bites, stings and envenomation. Most of this information is relevant for an USA audience, but it is still interesting.

Another chapter describes signs and symptoms of parasitoses, and contains information of much use to clinicians, or, for that matter, any of us interested in self-diagnosis of our latest ailments.

The book is printed on matt quality paper, and some of the illustrations lack the depth and resolution that might be present in a glossy-print format.

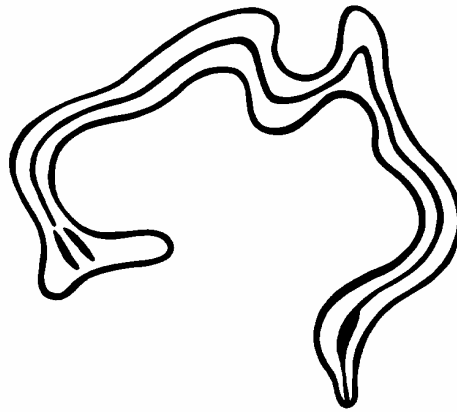
My major disappointment is the presentation in duo-colour, using violet as the contrasting colour, which makes the pages appear rather washed out.

That aside, this "Markel and Voge" is a very good book, to be recommended for all people involved in parasitology.

Malcolm Jones



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