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# Newsletter of the Ecological Consultants Association of NSW Inc.

## President's Message

Greetings for 2004

After a very successful year for the ECA, in terms of establishing the association as a professional body with some influence, it is now time to look to the future.

Regarding our continuing relationship with the relevant agencies, we are now in a position to offer advice and guidance to the NPWS (sorry DEC) on the accreditation of consultants preparing Species Impact Statements. There is a report in this newsletter on an accreditation workshop involving various government agencies and the ECA. In addition, we have been invited to comment on the new flora and fauna survey guidelines being developed. Individual members are communicating with agencies about various issues, and it is hoped that some of these will be taken up by the ECA.

We produced comments on Animal Welfare Unit's guidelines, and these will be posted on our new, improved web site ([www.ecansw.org.au](http://www.ecansw.org.au)). Another posting on the web site will be our submission to NPWS on the guidelines to the

new 7-part test. We were also asked to contribute to a Royal Zoological Society of NSW forum on the Threatened Species Act. The paper produced from that forum will be published in their journal, and will go on our web site as soon as I can get approval.

As part of our 2004 program we aim to improve the role of our newsletter, with a promise of four editions during the year. Part of the new newsletter will be a section on 'Unusual Sightings'. This section will allow the reporting of any observation that may be of relevance to other consultants, as well as to all researchers. There are newsletters from bird observation societies, as well as from the Australian Herpetological Society, which accommodate observations of these faunal groups. At present, there is no journal that accepts casual observations on mammals and other issues. Consequently, there is now a place for you to put such observations. In this issue you will find several such observations. Another section that we hope to create in the newsletter is one where a member can provide extended comments on an issue that is dear to their heart. This section (the 'Soapbox')

will give members a chance to let off some steam. Any inputs to the newsletter can be sent to Gerry Swan ([gerryswan@bigpond.com](mailto:gerryswan@bigpond.com)).

To add some legitimacy to the newsletter, Stephen Ambrose has investigated the viability of obtaining an ISBN number for our organ of communication, and this is now being obtained. Any articles published in the newsletter can be considered as a publication and quoted using the newsletter as the reference.

Deryk Engel has been undertaking sterling work in approaching various publishing houses and equipment suppliers in order to obtain a discount on their products for members. Please look out for inserts in the newsletter, as the offers are for members only.

With the 2003 Conference over (thanks again, Danny for all your organising), we are now looking to this year for new topics. One suggestion put forward is to have a mid-year forum on some of the logistic problems associated with ecological consulting. These could include Health and Safety issues, licence conditions, professional indemnity etc. What do you think? If you have any suggestions (particularly expert speakers), please contact Danny Wotherspoon at [wilderness@mountains.net.au](mailto:wilderness@mountains.net.au).

You will note that there is now a range of memberships and fees that, we hope, will accommodate all potential members. As members more than 200km away from Sydney may not always be able to travel to ECA conferences and meetings, it was decided to have a reduced rate for these people. It is hoped that we may be able to bring in more members from outside Sydney, particularly from the North Coast. We have plenty of enquiries, but it is difficult to expect much response if we cannot provide some tangible return. We are looking at starting a North Coast branch to attract members from this active part of the state.

Two other items:

1. Leong Lim has pointed out that the financial year defined in our set of Rules runs from January to December. As our Annual General Meeting is to be held within 6 months of the end of the financial year ie. by July, we have been holding our AGMs at the wrong time. The Council had moved to change the financial year to July to June, so our AGMs would be held at the correct time during November-December (when we usually hold our conference). However, to change the Rules we need to hold a Special Meeting where 75% of the members agree to the change. It is believed that all our AGMs are legal, but their timing (at present) is not. Once the membership for 2004

is settled, we will hold a Special meeting to change the time of the financial year. This will probably be undertaken by email and perhaps fax, to ensure a full response.

2. We now have a 'web master' who will change and enhance the web site as needed. This hopefully will lead to a more attractive site that will be used by those wanting to find out more about the ECA (and join as well). If you have any suggestions/additions/corrections please forward them to the Secretary, Judie Rawling at [ubms@urbanbushland.com.au](mailto:ubms@urbanbushland.com.au).

I trust that the increased value of the dollar and the perceived threat from terrorists have not affected your business. Over the years, I have found that periods of crisis have resulted in greater development activity. I think that most investors wait until a 'quiet time' to put their money into something that will yield rewards when times get better. They like to get some of the paperwork ie. EIS etc, out of the way.

With those thoughts, I wish you a happy new year.

*Martin Denny*



## ECA Council 2004

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## Can You Help?

Fiona Hogan, a PhD student, is conducting a study on genetic diversity of the Powerful Owl (also Barking & Southern Boobooks) across their entire range. She is asking for locations of known owls, and samples such as road kills, feathers, scats or other tissue. Contact details are: Fiona Hogan, School of Ecology & Environment, Deakin Uni - Melbourne Campus. Phone 0412 470 250  
Email: [fehogan@deakin.edu.au](mailto:fehogan@deakin.edu.au)

## ECA Conference

The 2003 ECA Conference was, once again, a huge success. Entitled "Expert Witness in the NSW Land and Environment Court" it was held on 31 October at the Corus Hotel in Sydney. About 70 people attended including ECA members, local government, NPWS, and other consultants.

The success was largely due to the speakers who put in a great deal of time and effort to enlighten our members on the issues of the Land and Environment Court. There were speakers from a wide section of the industry to ensure the broadest possible coverage of the subject matter.

Maureen Tangney, Director of Legislation and Policy in the NSW Attorney General's Department gave a delightful and informative introductory talk on the administrative framework as well as practical tips for expert witnesses.

Graham Andrews, former Conciliation and Technical Assessor (now called Commissioner) of the Land and Environment Court presented two informative papers, one on how the Court works and the second on a Commissioner's perspective on expert witnesses.

John Gibbins from NPWS Legal branch, clarified all issues regarding client confidentiality and the requirement to submit data to

National Parks and to have consultant reports open to public exhibition.

Pauline Green, the Land and Environment Court Registrar, presented information on the Expert Witness Practice Direction. This is the new framework in which expert witnesses prepare evidence for the court (see our CD of the proceedings, released soon).

Graham McKee of McKees Legal Solutions, Environmental Lawyers, was a breath of fresh air with his innovative "workshop" of questions and answers. The experience of an instructing solicitor gave depth to our understanding of the process of the court.

Dr Leong Lim, a vice president of the ECA and qualified in the legal profession, presented a paper on Expert Witness Professional Practice.

Miranda Stevenson, Business Development Executive of Unisearch Limited presented the final paper, an excellent consolidation of many of the aspects of expert witnessing presented during the day, with the added aspect of raising the profile and refining the skills of the expert witness.

We look forward to your suggestions for our next Conference, in November 2004. Please email me at: [wilderness@mountains.net.au](mailto:wilderness@mountains.net.au)

*Danny Wotherspoon*

# Adoption of the ECA Code of Business Practice, Professional Conduct and Ethics

At its AGM in November 2002, the ECA adopted an extensive code of ethics that is unprecedented among professional ecologists. Members should be aware that most other societies have a generic and simplistic code of ethics. By any standard, the ECA Code is elaborate and only time will tell if the ECA can champion the high standards it espouses.

This Code of Ethics is not meant to be **PRESCRIPTIVE ONLY** – it is also meant to be **PROTECTIVE** of members of the ECA who have adopted these rules in the conduct of their practice.

The ECA will support all its members who embrace this Code in their professional practice.

These Ethic Rules, inclusive of the Preamble, apply to all practicing ECA members and is voluntary for Associate members:

## PREAMBLE

1. The provision of independent ecological and biological conservation information and advice in New South Wales is best served by reserving the practice of consultancy to

qualified, experienced and duly accredited<sup>1</sup> practitioners.

2. As Ecological Consultants, practitioners must maintain high standards of professional conduct consistent with sound scientific and ecologically sustainable principles.
3. The role of Ecological Consultants requires them to maintain a high professional standard through approved Continuous Education programmes and act honestly, fairly, skilfully and diligently.
4. Ecological Consultants owe duties to the profession that includes other bodies and persons in their professional dealings, to their clients, and to their colleagues.
5. Ecological Consultants must exercise their forensic judgements and give their advice independently and for the proper assessment of ecological, and biological

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<sup>1</sup> **The ECA had intended to *accredit* its members according to their specialty, but this effort has been overtaken by the amendment to the TSC Act which will now require DEC (NSW) to *accredit* the party preparing a SIS – presumably, only if they have the appropriate qualifications and experience. The difference between the term *accreditation* and *certification* is not material here and they are used interchangeably. The latter implies that you would end up with a certificate to hang on your wall!**

conservation matters, notwithstanding any contrary intentions and desires of their clients.

6. The provision of ecological and biological conservation assessment for those who need advice is better served if there is an Association whose members:
  - (a) must accept instructions regardless of their personal prejudices;
  - (b) must not refuse instructions except on proper professional grounds; and
  - (c) compete as specialist consultants with each other and with other environmental consultants as widely and as often as practicable.
7. Ecological Consultants should be free to choose how they lawfully practice and that access to consultant's services be enhanced so far that the consultant's conduct is honourable, diligent, especially skilled, disinterested and competitive, except only in those cases where the unchecked exercise of that freedom would threaten harm to the greater public interest and the profession or aiding and abetting an illegal act.

The other rules include:

- DEFINITION OF CONSULTANT'S WORK
- INDEPENDENT CONSULTANT'S RULE

- FRANKNESS AND DISINTERESTEDNESS
- DEALING WITH DELINQUENT CLIENTS
- RESPONSIBLE USE OF DATA AND THEORY
- INTEGRITY OF DATA AND INFORMATION
- INTEGRITY OF SAMPLING PROCESSES AND DATA
- DUTY TO AND REFERRALS TO OTHER CONSULTANTS
- FEE ARRANGEMENTS AND THIRD-LINE FORCING
- CONFIDENTIALITY & CONFLICTS
- DISCIPLINE FOR BREACHES

Some of the noteworthy rules are listed below:

13. A consultant must not act as the mere mouthpiece of the client or of the instructing agent and must exercise the forensic judgements called for during the project independently, after appropriate consideration of the client's intentions and desires.

19. A consultant must confine the consultant's professional work to:
- (a) conduct ecological and biological conservation surveys and research;
  - (b) give ecological and biological conservation advice and assessments;
  - (c) carry out wildlife management, including pest control, reintroduction, habitat enhancement and captive breeding;
  - (d) provide the client ecological and biological conservation advice for negotiating with the opponent in a mediation and compromise;
  - (e) advise on ecological and biological conservation data and information to be used in the client's case;
  - (f) act as a referee, arbitrator or mediator on ecological and biological conservation matters; and,
  - (g) carry out work incidental to work referred to in (a)- (f), for example, prepare and collate material, experimental design and literature review.

32. A consultant must be an independent practitioner, and must only practice:
- (a) in partnership with another ecological consultant<sup>2</sup>; or
  - (b) as the employer of an ecological consultant; or
  - (c) as the employee of any

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<sup>2</sup> Include parties defined in Rule 2 (1) (b) of the Statement of Objects and Rules of the Association of Ecological Consultants of NSW Inc.

ecological consultant.

49. A consultant must hold current license(s) as required by law to conduct their activities legally.

The ECA will be developing formal procedures to deal with breaches any of these Rules by its members. Breaches will attract appropriate disciplinary action(s) as determined by the ECA for *unsatisfactory professional conduct or professional misconduct*<sup>3</sup>.

However, it would be difficult for the ECA to justify, and it would not be in its interest, to have any member that it has been found to have committed professional misconduct to continue to be a member of the association.

For example, members should be aware that a license is required for any sampling or experiment for survey and research in NSW. Those who do not have the mandatory licenses should seek appropriate advice in order to conduct their activities legally<sup>4</sup>. Other than risking

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<sup>3</sup> What constitutes *unsatisfactory professional conduct and professional misconduct* is yet undefined, but as a rule, the latter is a more serious offence that has been intentionally carried out.

<sup>4</sup> For example, a violation of licensing requirement would constitute *unsatisfactory professional conduct* but knowingly violating this requirement repeatedly would be considered *professional misconduct*.

prosecution and disciplinary action by the ECA, failure to do so may result in their data being excluded from a legal proceeding – resulting in them becoming useless to the client!

All complaints will only be dealt in writing. There are no formal requirements other than in writing (or by email) for the ECA Ethic Committee to deal with it at this stage. It has only to be addressed to any members of the Committee. As well as myself, Dr Martin Denny ([mtking@ozemail.com.au](mailto:mtking@ozemail.com.au)) and Dr Andrew Smith ([austeco@tpgi.com.au](mailto:austeco@tpgi.com.au)) are the other two members of the Committee.

Any member who is under investigation for a breach of the Code is entitled to the presumption of innocence and will be afforded the right of natural justice and the transparency of process. Any member of the ECA accused of a breach of the Code will have sufficient opportunity to defend themselves and/or provide an explanation to the Committee representing the ECA, and the accused party will have the right to know the circumstances of the allegation and the party(s) making the allegation(s).

Members should note that all matters dealing with an alleged breach of the Code are CONFIDENTIAL except for the decisions of the Committee.

What the Committee can not, should not and will not, do is to sanction any act that would expose the ECA and its members to the liability of litigation by a third party - whether or not it is morally or legally right. The responsibility of such actions lie with the individual, whether such actions amount to a violation, or a justifiable violation, of the Code will be a matter for the Committee to determine – if the matter is brought to its attention.

The Committee has received 1 formal and 2 preliminary verbal referrals. It found no evidence that a breach had occurred in the first case and was unable to deal with the others any further as they were not formally referred to the Committee.

If you are finding all this unduly complex or onerous to understand, follow or embrace – welcome to the real world of professional practice.

***Dr Leong Lim***  
Chair, ECA Ethics Committee

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## **Report on workshop on the Accreditation System for Consultants preparing SIS's**

As a representative from the ECA I was invited to contribute to the development of an accreditation system for persons preparing Species Impact Statements. Under the Threatened Species Conservation Act and the Threatened Species Conservation Amendment Act 2002, the following extracts are pertinent to ecological consultants.

### **Section 113:**

#### **Director-General may accredit persons to prepare species impact statements**

- (1) The Director-General is to institute arrangements for the accreditation of suitably qualified and experienced persons to prepare species impact statements for the purposes of the Act.
- (2) An applicant for accreditation must furnish the Director-general with such information as the Director-General requires to effectively determine the application and must be accompanied by the fee fixed by the Director-General for the consideration of the application.

- (3) An accreditation is to be for the period specified by the Director-General in the instrument of accreditation, and the accreditation (or any renewal of it) may be given subject to the conditions and restrictions (if any) specified in the instrument of accreditation.
- (3a) Without limiting subsection (3), an accreditation is to include conditions that require a species impact statement to be prepared in accordance with survey standards approved from time to time by the Director-General by order published in the Gazette.
- (4) The Director-General may vary conditions or restrictions (if any) attaching to an accreditation and may suspend or cancel an accreditation.

#### **Schedule 7, Part 4**

#### **9 Accreditation arrangements**

The Director-General is to ensure that the arrangements referred to in section 113 (1), as amended by the *Threatened Species Conservation Amendment Act 2002*, and the survey standards referred to in Section 113 (3A), as inserted by that Act, are instituted or approved within 18 months after the date of assent to that Act.

A meeting was held at NPWS offices on the 20<sup>th</sup> November,

2003, and the following attended:

Joanne Edney (HO NPWS)  
 Kylie McClelland (HO NPWS)  
 Alison Schumacher (HO NPWS)  
 Maria Matthes (Northern Region, Threatened Species Unit, NPWS)  
 Ray Giddins (Central Region, Threatened Species Unit, NPWS)  
 John Gibbins (Legal Branch, NPWS)  
 Elvin Wong (Policy Development Unit, Contaminated Sites, EPA)  
 Anne Conway (Environmental Institute of Australia and New Zealand)  
 Martin Denny (ECA NSW)  
 Stuart Little (DIPNR - formerly Planning NSW)  
 John Pursey (NSW Fisheries)  
 Sharon Molloy (NSW Fisheries)

Presentations were by:

**Elvin Wong**, who described the system of accreditation for Auditors of contaminated sites. Auditors review works conducted by consultants at contaminated sites, and they must be suitably qualified and experienced. There are clear selection criteria and processes for accreditation and renewal (one year if newly appointed, then every three years). There is an Auditor Panel that undertakes the accreditation process.

The process has the following characteristics:

- Discretion in accreditation and revocation
- Clear roles and responsibilities for all involved
- Clear policy and performance standards (these are set out in 'Guidelines for NSW Site Auditors Scheme', on the EPA website)
- Adequate resources, and
- Public transparency

**Anne Conway**, who presented the latest proposed certification model for the EIANZ (this was just approved at the recent meeting at Broken Hill). The recommendations of the Working Group are:

- (1) Adopt a Certified Professional Scheme.
- (2) The Certified Environmental Professional Scheme should initially be an initiative solely of the EIANZ.
- (3) A Certification Board should be established under the umbrella of EIANZ, perhaps as a separate legal entity. The Board will be charged with the responsibility of certifying environmental professionals and withdrawing certification where there is breach of professional or ethical standards. Certification should initially be in one area - general environmental practice.
- (4) The following are the proposed minimum

requirements for Certification:

- An environment related degree (or experience for >10 years)
  - Five years of experience in the functional areas of environmental practice during the last 10 years
  - Nomination by four respected environmental professionals who are willing to act as referees for the candidate
  - Evidence in the form of referee statements (at least two), publications, citations, curriculum vitae, reports etc that the candidate is respected, competent, ethical and active member of the profession
  - Ongoing commitment to training and professional improvement (in the order of 50 hours over a two year period)
  - An interview or test may also be required, based on the discretion of the Board.
- (5) Certification renewed every two years.
- (6) Charges for Certification

**Martin Denny** described the problems associated with the development of an accreditation system by the

ECA. By having four levels of accreditation (Student, Provisional, Professional, Leading Professional) and divisions into different fields of flora and fauna assessment (seven major divisions and 28 minor divisions), the resulting system became unnecessarily complex. It was generally acknowledged by the workshop participants that this was not the direction to move in developing a system of accreditation.

The following points were presented as expressing the feelings of the ECA members:

- any accreditation scheme may be used to obtain commercial advantage
- a scheme that concentrates on expertise in particular flora/fauna groups may exclude those capable of producing an SIS
- several councils and at least one agency have an informal register of consultants that produce acceptable work i.e. an accreditation scheme already exists in the market place
- Any accreditation scheme must not be too complex
- The general feeling is that an accreditation scheme should include, as a minimum:
  - a degree in relevant field (or equivalent)
  - have experience in application of expertise

- be a member of a suitable scientific association
- be a member of a suitable professional association
- There is a desperate need for a 'hands on' course in flora and fauna survey techniques and impact assessment skills
- A system of review of species impact statements may need to be re-established, to ensure adequate performance by consultants

There was considerable discussion in the afternoon, and the following points were noted:

- a) The Act does not say that a person has to be accredited to prepare a SIS, only that the D-G is to institute arrangements for the accreditation of suitable persons.
- b) Instead of trying to create a new system of accreditation, it would far better to use an existing system as a guideline.
- c) The system used by the EPA has much merit, but it appears to lack 'teeth' ie. difficult to control mavericks. The EPA is introducing additional legislation at present.
- d) The difficulty with accrediting persons to prepare an SIS is that it is difficult to target what expertise is required. Many SISs are prepared by persons with skills in presentation and knowledge of the legislative requirements,

rather than a deep knowledge of flora and fauna. It is often the sub-consultants who undertake the impact assessment in their individual reports and the person who prepares the SIS must be skilled in synthesising their results and conclusions.

- e) The additional requirement for a person preparing a SIS to understand the social and economic impacts confuses any requirements for accreditation.
- f) The ECA was asked to assist with the survey standards currently under development. This, again, is an opportunity to have some influence in this process.

In conclusion, the convenors stated that a discussion paper would be prepared by the beginning of 2004. Schedule 7 (see above) requires that the accreditation arrangements are put into the Regulations of the Act by April, 2004. It was admitted that this would be unlikely.

*Martin Denny*

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## New Membership Categories

At the 2003 AGM, the ECA Council passed a motion to broaden the membership categories offered. The aim being is to widen the membership base so that interested and relevant students, Council staff and agency staff can join more readily. Also a country membership category was adopted to take into account the costs incurred by members travelling to Sydney for our meetings and conferences.

The membership categories are:

- **Practising Member (\$160) (Practising Ecological Consultants - voting rights, signs the Code of Ethics)**
- **Country Member (\$95) [Practising Ecological Consultants living outside a 200km radius of Sydney](voting rights, signs the Code of Ethics)**
- **Non-practising Member (\$60) - no voting rights, does not sign the Code of Ethics. This fee is substantially reduced (from \$160). It is aimed at Council and Agency staff.**
- **Associate Member (\$60) for 2 years upon graduation (no voting rights, signs the Code of Ethics)**
- **Student Member (\$30)(no voting rights, does not sign the Code of Ethics).**

Please disseminate this information to anyone you think may be interested in joining the ECA. With a larger and wider membership the ECA will be a more representative and effective group

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## Waterbird Research expedition Opportunities

A register is being compiled of people who are interested in taking part in expeditions to Siberia, Alaska, China, India and other Asian countries. The organisers are looking for motivated people who have experience in any of: shorebird identification, bird surveys (counting), banding & leg-flagging, mist-netting, cannon-netting, morphometric measurements, etc.

Level of fitness for most expeditions will be that of an experienced bushwalker. People included in the registry will be notified as opportunities come up. However the first expeditions to Russia will depart in May 2004.

Once you have been accepted for an expedition you will, typically, be expected to find and finance your own way to the starting point, for example Moscow. You will then join the group and travel to the study areas and assist in fieldwork, catering, etc., as a member of the expedition. This will involve camping, walking, boating, flying from place to place under the same conditions as the expedition researchers. You will be expected to pay for all your own expenses of travel, food and camping etc although these will be organised by your host researchers. You will also be expected to cover your

own travel insurance and personal liability.

Depending on the project, expeditions will vary in length from a week or two to about eleven weeks. The more remote the area the longer the time required due to travelling time, government formalities etc.

By volunteering to help with expeditions you will be helping research and conservation efforts of some of our most endangered species and habitats. If you are interested in registering your name you should in the first instance contact Phil Straw, Shorebird Projects Volunteer Register, at: [pstraw@optusnet.com.au](mailto:pstraw@optusnet.com.au) or PO Box 2006, Rockdale Delivery Centre, NSW 2116. Phone 9597 7765.

The following information should be supplied: Name; address; telephone; fax; email; remote area camping experience and skills; skills in waterbird identification, bird surveys (counting), banding & leg-flagging, mist-netting, morphometric measurements, other appropriate skills.

*Stephen Ambrose*

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## **A Report on the 3<sup>rd</sup> International Wildlife Management Congress, Christchurch NZ**

This Congress was held on the 1-5 December 2003 with 6 concurrent sessions and several workshops. There were also pre and post-conference study tours and specialist workshops.

The first noteworthy thing about this Congress, organised jointly by the Wildlife Society (USA), Landcare (NZ), AWMS and Ngai Tahu, is that it raised US\$ 240 000 from sponsors and used all these funds to assist 1<sup>st</sup> Nation Peoples from all over the world to attend this watershed meeting. Wildlife managers dominated by WASPs have finally realised that they must engage the traditional landowners if conservation and wildlife management programs are to succeed.

I have selectively quoted from the three key plenary speakers:

“The maintenance of their (traditional) Treaty-base rights (mahika kai).... Ngai Tahu continue to find themselves in tensioned relationships with environmental and species management agencies and NGOs.

The more recent revolution of environmental policy settings

around concepts which are less scientific and empirical, and extremely broad and ideological in character has given a new form to old tensions.

.....Eat more babies!”

Sir Tipene O’Regan, Ngai Tahu NZ

“Changes in social, economic and biological values continue to vex our citizenry (sic) and government organisations.

History will tell us that conservation will succeed to the extent that we serve the human condition. Failing to do so is a sure way for failure.”

James G Teer, Emeritus Prof, Texas USA

“Conservation and wildlife management continues to focus on individual species to prevent extinction. However, all species are part of an ecosystem.....Food-web dynamics are in turn related to two aspects of ecosystem, “keystone processes” and “multiple states”.

Understanding these aspects is important in planning global climate change.

ARE Sinclair, Prof., Vancouver Canada

Note the typically “pure” scientific approach of the 3<sup>rd</sup> plenary speaker compared to the first two.

The post-conference study tours included visits to a

variety of private ecotourism operations from Maori whale watching operation at Kiakoura, glow worm cave management in Te Anau to a private Pakiha Yellow-eyed Penguin management farm outside Dunedin. There were also visits to a Maori community habitat and ecosystem reconstruction project, wetland rehabilitation project, Black Stilt and Tuatara recovery projects and the management of Stewart and Ulva Islands and the surrounding areas as a wildlife refuge.

To say NZ has Brush-tail Possum, mustilid and rat problems would be an understatement. But it also has a host of other introduced species, some of which are listed threatened species in Australia, in particular NSW. For example, the Green and Golden Bell Frog. And it has native birds with attitude - the Kiwis, Kakapo and Kea - sadly all are at risk to a greater or lesser degree.

I attended the workshop on "Model Selection and Multimodel Inference". It's an alternative to classical multi-factorial analyses and null hypothesis testing. You will need to understand this if you want your quantitative scientific papers to be published from now on or have any chance of comprehending quantitative ecological papers. See Burnham, KP & Anderson, DR (2003) *Model Selection and Multimodel Inference*. A

*Practical Information-Theoretical Approach*. 2<sup>nd</sup> Ed Springer, NY.

Papers presented were mostly of exceptional quality ranging from Caribou harvesting in Canada, child mortality from Tigers and Leopards in India, to what makes Mountain Lions attack people on the Rocky Mountains, but there were notable low points. The representative of US hunting lobby ended his talk with links between high IQ and hunting, expressing disappointment with their aging membership and that they have largely been unsuccessful in recruiting young, female or non-White hunters. I suggested to him that these people might have discovered sex! There was also a Norwegian hunter presenting a paper on the appropriate 222 to 303 caliber bullet design to use for shooting Beavers in the gut. He will no doubt be answering to the Norwegian Parliament after I made a complaint about the excessive and unnecessary cruelty and total lack of consideration for the animal's welfare - constituting unacceptable and less than civil behaviour.

Alas I had nothing I could hand out about the ECA to this most influential collection of peoples from throughout the world.

*Dr Leong Lim*

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## **Unusual/casual observations.**

This column has been instigated to allow members to report experiences, observations and the like that could be of interest to other members, e.g. unusual or previously unreported behaviour, range extensions, rare species, amusing anecdotes, etc. Although there are plenty of avenues for unusual bird observations to be recorded, there are few for other fauna and flora observations to reach us in a readily accessible and timely manner. The items can be from one paragraph to one page. It is not intended that contributions to this column will be sent out for peer review or refereeing. Comments or feed back on any items published will be welcomed.

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### **Some observations on the Cumberland Plain Land Snail (*Meridolum corneovirens*).**

Whilst the NSW Scientific Committee's final determination for the Cumberland Plain Land Snail clearly states that this species occurs in eucalypt woodlands, I have been requested on a number of occasions to consider its presence within those "woodlands" that occur adjacent to creek lines on the Cumberland Plain (I'm guessing this flows on from point one of the NSW Scientific Committee's final

determination that states that this species "is found on the Cumberland Plain in remnant pockets of urban bushland, in areas associated with Wiannamatta Shale and old Nepean river gravels"). Generally I have observed that these areas are dominated by the vegetation community "Sydney Coastal River Flat Forest", a community type often dominated by Swamp Oaks (*Casuarina glauca*). Whilst conducting numerous ground debris searches within this habitat type, at a number of locations throughout Western Sydney, I have yet to record any Cumberland Plain Land Snail individuals (either living or discarded shells) within this habitat type.

It is my belief that, given the type of debris generated by the maturing Swamp Oaks [needles and small limbs], the ground cover is unsuitable for the Cumberland Plains Land Snail's sheltering and foraging needs. Whilst never investigated, I'm guessing that the chemicals generated by the decaying Swamp Oak needles are unsuitable for the generation of the fungi that the snails feed on. Similarly, the lack of any large branches or leaf litter accumulations would negate this species sheltering within this area. It is therefore my belief that the Cumberland Plain Land Snail is not associated with the Sydney Coastal River Flat Forest community, and should not be a species considered if this habitat type is

encountered within a survey area.

### *Deryk Engel*

Comment: I've found it in Sydney Coastal River-flat Forest not dominated by Swamp Oak, i.e. Forest Red Gum Rough-barked Apple. It could also be that Swamp Oak forest indicates saline soils, which may physiologically affect the Snail or the fungi on which it feeds.

### *Paul Burcher*

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#### **Feeding preferences of Glossy Black-cockatoos.**

Whilst holidaying at Fingal Bay during December 2003, I was surprised to observe three Glossy Black-cockatoos (*Calyptrorhynchus lathamii*) feeding on fruits of Coast Banksia (*Banksia integrifolia*) growing on the dune behind the beach. They would spend about an hour or two each morning foraging on the fruits that were the result of the previous winter's flowering. The NPWS profile of the species states that it is an *exclusive* feeder on the seeds of she-oaks. Generally, in eastern NSW, Forest Oak (*Allocasuarina torulosa*) and Black She-oak (*A.littoralis*) are consumed. However, the "old" Atlas of Australian Birds (Blakers et al, 1984) mentions that the species has also been recorded eating *Angophora* fruit, wood-boring grubs and sunflower seeds. Another unusual observation was Glossy Black-cockatoos feeding on Macadamia nuts (see Morris, 2000).

This has implications for assessing the impact of development on the species, at least in the Port Stephens area. If GBCs are known to be present in an area then any Coastal Banksias present should be checked on ground for foraging activity. GBCs are less destructive than Yellow-tailed Black-cockatoos so it should be possible to distinguish between them. Then, if used the Coast Banksia habitat should be included in the home range assessment for the species.

Apart from having relevance to the Glossy Black-cockatoo, this observation adds to Coast Banksia's status as a keystone species. Due to its reliable winter flowering it is an important source of nectar and pollen for a range of fauna including Squirrel Gliders, Eastern Pygmy-possums, Blossom-bats and Flying-foxes.

#### References:

Barrett, G., Silcocks, A., Barry, S., Cunningham, R. & Poulter, R. (2003) *The New Atlas of Australian Birds*. Birds Australia.

Blakers, M., Davies, S.J.J.F., & Reilly, P.N. (1984) *The Atlas of Australian Birds*. Royal Australasian Ornithologists Union, Melbourne University Press.

Morris (2000) NSW Annual Bird Report for 1997. *Australian Birds* 32 (1).

### *Paul Burcher*

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## Some observations on the Squirrel Glider (*Petaurus norfolcensis*), and the implications of these to the management of this threatened species.

While undertaking a fauna survey in a stand of remnant woodland in the Wyong area, New South Wales (February 1998), a male and female Squirrel Glider were captured. The study site is 4 kilometres east of Wyong and 3 kilometres west of Tuggerah Lake. This brief note provides a description of the habitats present in the capture area and the distances of a number of glides observed. The heights of the Squirrel Glider's take off and landing points, and a glide angle, are also given, all measurements being collected by a registered surveyor.

While undertaking the literature review for the project, few references to known home ranges, glide distances, glide angles and other information relevant to the management of the Squirrel Glider were found. Therefore the gliding information obtained during the study was used to propose site specific management guidelines to ensure that there was not a significant impact on this threatened species, particularly the significant fragmentation of home range areas. These guidelines were used to ensure that the local Squirrel Glider population was not disturbed or threatened by clearing for the proposed residential subdivision, including the

associated roads, and that the viability of the local population was maintained.

### Structure of the Woodland

The vegetation communities present in the area surveyed included a Spotted Gum *Corymbia maculata* - Ironbark (Grey Ironbark *Eucalyptus paniculata* and Northern Grey Ironbark *E. siderophloia*) Open Forest/Woodland and *Melaleuca* Low Closed Forest with Eucalypt emergents.

### Results

Nine glides were observed. The distances between each tree used, the height of the take off and landing points and the breast height diameters of the trees used is provided in Table 1. The female was followed until she entered a tree hollow, presumably her roost, while the male was lost to sight in the canopy of the last tree it landed in. This tree supported numerous hollows but the male was not seen entering any of them.

It is noted that, in relation to the male's movements, the middle storey and undergrowth layers between each glide tree was absent and that the ground cover is heavily grazed and littered with old car bodies and agricultural equipment. Trees in this area, though mature, were widely spaced.

The female was captured in the *Melaleuca* Low Closed Forest, an area that is more heavily vegetated. Trees in this area were more closely spaced,

being in the order of around two to three metres apart. It is because of the proximity of these trees, and the closeness of the tree canopy that glide angles of zero degrees were recorded (Table 1). These angles indicate where the female was moving horizontally between trees.

Because of the proximity of the *Melaleuca* Low Closed Forest to the Spotted Gum - Ironbark Open Forest/Woodland, and the occurrence of winter flowering eucalypts within the *Melaleuca* Low Closed Forest, this vegetation community is considered to constitute an important winter component of the Squirrel Glider's home range and foraging resources.

### Conclusions

Though it is acknowledged that the sample size of glides observed was small, this was used to determine the average angle used by Squirrel Gliders during their gliding periods. Based on this angle, the maximum open space distances permissible between glide trees, within each portion of the study area, based on the height of the existing forest canopy, was determined.

Based on the finding of the study, an average glide angle of 18.8 degrees was established. Therefore, for example, in woodland areas within the area surveyed that support trees of around 20 metres in height, an open space area of greater than 58.7 metres in width was expected

to result in the fragmentation of glider habitat (Table 2).

It was therefore assumed that permissible distances between mature trees 20 metres in height could be around 45 to 50 metres and this distance was therefore recommended where open space areas, including roads, were Proposed. This range of possible distances between glide trees is consistent with the observed glides made by The two captured individuals

during the field survey. As the tree height within the study area decreased, the width of any possible open space was also reduced.

The information obtained during this study assisted with the determination of the most suitable location for the construction of local roads, whether these roads should be single laned or separated by a vegetated island, whether residential blocks should be large or small and so on. The

adoption of these mitigation measures were considered to have benefits for this species, and assisted when considering Point (d) "habitat fragmentation" of the "eight part test". As this type of information is not currently available in the literature, it is expected that the management implications incorporated into the study could be extrapolated to other sites that support Squirrel Glider populations.

*Deryk Engel*

	Distance between trees used (m)	Total height of tree used (m)	Height of take off point (m)	Height of landing point (m)	Glide angle	Breast height diameter of tree used (m)
<b>Male</b>						
Glide One	42.2	23.5	18			1.5
Glide Two	28.7	20.0	16	1.5	21 <sup>0</sup>	0.9
Glide Three	35.9	19.0	11.5	2.5	25 <sup>0</sup>	0.8
"end tree"		26.0		3.0	13 <sup>0</sup>	0.9
<b>Female</b>						
Glide One	8.7	11.5	10.5			0.35
Glide Two	1.6	7.0	7.0	7.0	21 <sup>0</sup>	0.12
Glide Three	2.3	12.0	7.0	7.0	00 <sup>0</sup>	0.15
Glide Four	1.4	20.0	7.0	7.0	00 <sup>0</sup>	0.3
Glide Five	3.7	8.0	7.0	7.0	00 <sup>0</sup>	0.2
Glide Six	15	20.0	7.0	7.0	00 <sup>0</sup>	0.25
"end tree"		22.0		3.0	14 <sup>0</sup>	1.0

Table 1 : Gliding data recorded during present survey.

$$\text{Width between gliding trees (W)} = \text{Average height of woodland (H)} \div \text{Tangent of the average glide angle (Tan GA)}$$

$$W = H/\text{Tan GA}$$

Therefore for the current study :-

$$\text{Width between gliding trees} = 20 \div \text{Tan } 18.8^{\circ}$$

$$\text{Width between gliding trees} = 58.7 \text{ metres}$$

**Width between glide trees expected to result in the fragmentation of glider habitat therefore would be distances greater than 58.7 metres.**

Table 2 : Mathematics used to determine unsuitable distances between glide trees.

## Book Review

Frankham R, Ballou, JD and Briscoe, DA (2002) *Introduction to Conservation Genetics*. Cambridge, UK. 617pp beautifully illustrated plus problems and practical exercises with answers.

What you should know, or should have known, about Conservation Genetics but too Afraid to Ask? A review by Lim in *Pacific Conservation Biology*, 2001, Vol 7 (3): 217 - 218.

Members of the ECA should note that they must do more than just being able to conduct wildlife surveys if they want to be recognised as professionals.

*Dr Leong Lim*

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## More on books.

Enclosed with the hard copy of this newsletter members will find a flier from CSIRO Publishing offering ECA members a 10% discount a number of books dealing with ecology and wildlife. Please note this offer is only valid until 30 April 2004.

A special thanks to Deryk Engel for his efforts in procuring this special offer for members. Watch for more offers in future newsletters.

Gerry Swan has recently co-authored a second edition of his 1990 Field Guide to the

Snakes & Lizards of New South Wales. The new edition *A Field Guide to Reptiles of New South Wales* was released in February 2004. Like the original version it contains Photographs, descriptions and dot distribution maps of the known NSW species. This edition includes freshwater turtles and the marine snakes and turtles. The distribution maps are composed from the Australian Museum specimens plus additional localities from the National Museum of Victoria and the Australian National Wildlife Collection, Canberra.

Members can obtain copies for \$30 including postage (retail price \$34.95). Email your requirements to Gerry Swan at [gerryswan@bigpond.com](mailto:gerryswan@bigpond.com).

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## Website.

The ECA website is at:

[www.ecansw.org.au](http://www.ecansw.org.au)

This contains more information on the ECA as well items of interest to members such as our comments on the Animal Welfare Unit's guidelines, our submission to NPWS on the guidelines to the new 7-part test, and more. Make sure you visit the site. If you have ideas for improvements etc make these known to the Secretary, Judie Rawling.

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## Newsletter title?

The "Newsletter of the Ecological Consultants Association of NSW Inc." sounds OK but it is a bit of a mouthful. How about some suggestions on a suitable, snappy name that we can embellish on the front page. Send your suggestions (and any translations if they are really clever) to the editor for submission to the next Council meeting. And while you are at it we should have a suitable name for the column on unusual observations, so come up with some ideas for that one as well. One suggestion already received for the column is "Field Notes".

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