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AUSTRALASIAN WILDLIFE MANAGEMENT SOCIETY

Newsletter of the Australasian Wildlife Management Society

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Inside this issue:

FeralScan website - a new tool for pest animal mapping

The FeralScan project is a new initiative of the Invasive Animals Cooperative Research Centre (IACRC) to better engage the Australian public in mapping pest animal populations and the problems these animals cause. FeralScan is a web-based community tool for mapping some of Australia's most significant pest animals, including foxes, rabbits and wild dogs. The aim of FeralScan is to improve accessibility to pest animal data and our capacity to bring landholders, community groups, industry, business and government together to address pest animal problems.

As pest animals affect all Australian's, either by putting food security at risk, reducing the productive capacity of farmland, threatening our biodiversity, damaging cultural assets, or causing a nuisance in urban landscapes, FeralScan has nation-wide relevance. FeralScan provides for the first time, a national web-based data gathering facility for the Australian public to record, manage and communicate real-time information on pest animals that can be examined from the local level through to a national scale.

The FeralScan website is a resource for the community to map pest animals in their local area and to provide an overview of pest animal problems. It can be used by individuals, community-groups, landholders and Landcare groups, local government, regional NRM organisations and pest control groups.

FeralScan empowers users with the capacity to detect, record, control and monitor pest populations and utilise that information in their decision-making.

Information recorded in FeralScan can also be viewed by research organisations and government to better deliver research, policies and programs to match current and evolving pest animal problems.

Users can record three types of information: sightings of pest animals, the damage caused by pest animals, and on-ground control actions in their local area. Data is displayed in real-time showing trends across regions and across the country.

This allows users to gain an understanding of the extent of pest populations, the magnitude of problems, and areas where control is underway at any given point in time. Importantly, FeralScan provides data for pest prioritisation, management planning, evaluation of management actions, and deployment of control techniques. Participants can also connect with others to share knowledge, skills, and resources.

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Have you registered for the AWMS Conference 2011?

29 November - 1 December, Bathhurst, NSW

Register online now by clicking here

Download the Preliminary Program

President's Report - *October 2011*

The 2011 conference is in the final stages of organisation under the capable management of Dr Peter Fleming and Doreen Culliver. We have had our last 23 conferences in many different venues but this is definitely the first time our conference has been held at a nationally famous (Mt Panorama) car racing track. The venue is on the home straight and the resident population of kangaroos poses a serious management issue for race organisers and the local council. With a conference theme of 'Communities and Wildlife Management' this seems a most appropriate venue. The Ice Breaker function will be held in the National Motor Racing Museum, also another first for the society.

If you enjoy fossils and/or minerals Peter Fleming has arranged a tour to the world famous Somerville collection at the Australian Fossil and Mineral Museum (with the only complete Tyrannosaurus rex in Australia) on Tuesday evening of the conference. I strongly recommend this museum which is in the centre of Bathurst. Details can be found on: http://www.somervillecollection.com.au/

Across the Tasman where the All Blacks have equalled the Wallabies and the Springboks in Rugby World Cup wins, Dr Al Glen is in the final stages of preparing the AWMS symposium "*Integrating Research and Community Led Management*". This symposium will be a feature at the International Congress on Conservation Biology which is to be held at the Sky City Convention Centre in Auckland from 5-9 December 2011. I would like to thank Al on behalf of all members for his initiative and efforts in organising the symposium.

The year 2012 will mark the society's 25th conference. This should be an occasion for a special event so I hope the committee receives some imaginative proposals regarding themes and location following a call put out to members through the list server. I recall when we initiated the society; the head of one Australian Vertebrate Pest Authority loudly stated the society would never be able to get sufficient support to hold a conference every year. How wrong that person was!

As we approach our 25th year some members have suggested to the committee that it may be time to bestow Honorary Membership to deserving members. The constitution says

> "*The association may invite any professional scientist, or other scientifically or technically interested person, to be an honorary member of the association in recognition of his/her distinguished contribution to wildlife management and to the association*".

Should any of you wish to nominate a person as an honorary member you are required to submit a written proposal to the secretary.

Full details of process are provided in sections 39, 40 and 41 of the constitution.

At this year's annual general meeting a number of positions will need to be filled in addition to that of president. Members are encouraged to nominate for the vacant positions which have been announced on the member's list server. I urge you to make a contribution to the science of wildlife management in the Australasian region by joining the committee. All details regarding responsibilities of the various positions are in the constitution which can be found on the website.

The society recently joined forces with the Royal Zoological Society, Ecological Society of Australia, Professor Mike Archer of the UNSW and Dr Alastair Grieve who is Chair of the Research Scientists Committee in NSW, to lobby the NSW government about its severe 50% cut to the staff of the Forest Science Centre in NSW Forests. The Biodiversity and Ecology section has suffered an 80% cut, leaving it with an unworkable critical mass of a single research scientist and technical officer. We took a delegation to meet with the Parliamentary Secretary of the Premier and I also arranged a meeting with the Parliamentary Secretary of the Minister for Primary Industries who is responsible for Forests NSW. I fear however that our efforts to fight for science may be in vain as the government is more focused on balancing its budget, rather than taking a long term view of investing in research.

As a final note this will be my last newsletter after three years as president. I have enjoyed leading and working with a committee that has attempted to make the society more relevant to its members. Over the last three years we have: updated the web site and contracted an independent web site manager, amended the constitution at the 2009 and 2010 annual general meetings, re-established the newsletter on a regular basis, formed a liaison with the Southern African Wildlife Management Association, organised a symposium on Research and Policy, held two planning workshops and drafted a business plan, set policies on sponsorship, media and membership process, increased membership fees to reduce reliance on conference proceeds to cover operating costs, approved payment of an honorarium to the president as well as the newsletter editor, amended the conference guidelines and produced new AWMS flyers and AWMS publicity banners for use at conferences. We are currently developing guidelines for annual student and practitioner awards.

I look forward to seeing you at the Bathurst conference and intend to contribute to the society in my ex-officio position of immediate past president.

Terry Korn PSM
President

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FeralScan has built on the successful RabbitScan project (led by the Rabbit Management Advisory Group in 2009) and the ABC's Feral Month campaign in January 2011, and broadened the application to encompass a range of nationally significant pest species. FeralScan currently hosts sites for rabbits (RabbitScan), feral camels (CamelScan), myna birds (MynaScan), foxes (FoxScan), and cane toads (ToadScan).

Over the next few months, FeralScan will release additional websites for feral pigs, wild dogs, introduced fish, feral goats, deer, and starlings.

How FeralScan works

FeralScan utilises an easy-to-use Google Mapping interface and a secure database to gather and report real-time data for audiences Australia-wide. Participants can enter a single sighting, damage or control record, or upload multiple records to the site. FeralScan provides data importing and exporting facilities, a photo uploading service and gallery. Users can also create and print their own maps containing the latest data.

Over 8000 records of pest animal sightings, damage sites and control activities have been recorded in FeralScan so far, with over 4500 registered participants entering data.

FeralScan users can access best-practice pest management resources, and are encouraged to utilise the breadth of pest animal planning tools, including PestPlan, PestSmart Toolkit (see the July 2011 issue of the AWMS newsletter) and teacher education resources (e.g. PestTales). The website also provides links to possible funding support, control information, and established community action groups. FeralScan is set to provide a valuable resource for established community groups as well as formalise community action at the frontier of many expanding pest distributions.

FeralScan is an initiative of the Invasive Animals CRC in partnership with NSW Department of Primary Industries, Australian Bureau of Agricultural and Resource Economics and Sciences, Landcare Australia, Western Catchment Management Authority (NSW), Woolworths, Toshiba, Ninti One Limited, the ABC, and community groups Australia-wide.

To get involved in FeralScan, visit **www.feralscan.org.au**

For further information, contact:

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An Australian Government Cooperative Research Centre
Orange Agricultural Institute,
Forest Road, Orange NSW 2800
T: 02 6391 3887 E: peter.west@industry.nsw.gov.au

Get focused on ferals!

Vertebrate pests occur in all parts of Australia, causing major damage to crops and agriculture, native bushland, rivers and waterways, even sporting fields and beaches. Many private and public land managers spend considerable time and resources managing the impacts of pest animals which also cause significant social impacts among rural and urban communities. Already this year, farmers have suffered losses as a result of the devastating impacts of mice, wild dogs and feral pigs on crops and livestock, with more damage expected to come this spring. There are also ever increasing reports of pest problems in urban zones especially due to foxes, rabbits and deer.

To help raise awareness about pest animals and illustrate the damage that is being done across the country by pest animals, the Invasive Animals CRC (IA CRC) is running it's first-ever 'Feral Photos' photography competition. They are looking for your photos showing pest animals in their habitat, the damage caused by pest animals and also photos that exhibit the various control methods that are available.

The Invasive Animals CRC Natural Resource Management Liaison Officer, Jessica Marsh hopes the photo competition will remind landholders, environmental staff, volunteers and members of the public about the widespread presence of pests and the importance of keeping a record of pest animal sightings and damage. "I hope the competition encourages people to get out there and see what is happening in their environment and to get creative about how they can record and report on pest animals in their area"

Photos provide strong visual evidence of pest animal impact and if used continuously, can help land managers and government agencies to monitor changes across the landscape. There are great prizes up for grabs so make sure you visit www.invasiveanimals.com/feral-photos or contact Jessica for an entry pack jessica.marsh@industry.nsw.gov.au

The promotion has also been displayed on the AWMS website for the past few weeks.

Is New Zealand 100% pure or even clean and green?

There has recently been much debate around the '100 percent pure', clean-green image that New Zealand trades on globally, after the Prime Minister was grilled in a BBC Television interview about the reality of the image.

Of course being 100 percent anything is an impossible task and terms like 'clean green' and '100 percent pure' are advertising slogans, but to most people they imply some underpinning of environmental reality.

So how does New Zealand measure up environmentally? In this article I have collated from many sources some of New Zealand's 'environmental credentials' - see what you think after reading some facts.

A starting point for determining the clean-green status of any country is to look at its biodiversity status. In New Zealand it's a bleak picture, with 35% (2788 species) of all native plant and animal species now listed as being at risk of extinction.

The sad list includes all New Zealand's terrestrial mammals and frogs, 85% of vascular plants and marine invertebrates, 60% of reptile and native fish species, half the bird, macro-algae and bryophyte species, one third of the freshwater invertebrate species and a quarter of marine fish species.

Another important component of a country's biodiversity status is how much homogenisation has occurred. Again New Zealand fares badly, for example there are now about twice as many introduced plant species as native, and about a third of the freshwater fish and bird fauna are introduced. It is important to bear in mind that these biodiversity declines inherently under represent actuality because the distribution and abundance data are inevitably historic and related to the effort put into monitoring changes. Thus, when assessing threatened species by putting less money into conservation and research, governments can (temporarily at least), make it look as though things are not so bad.

At another scale, that of ecosystem diversity, the New Zealand situation is bleak. Now more than two thirds of all land ecosystems identified in New Zealand are classed as threatened and only ten percent of the pre European wetlands now remain, the rest have been drained for farming and housing.

Despite the fact that around 30% of the country is protected as National Parks and reserves, most of this is land that was unwanted for agricultural production and is consequently in alpine or extremely inhospitable areas. So, while alpine ecosystems are protected, important mainland lowland forest and wetland ecosystems are almost completely lost. While some of the destruction is historic, the recent 'dairy boom' driven land-use changes have predominantly meant that the rate of loss of indigenous vegetation has been higher in the last decade than at any other time since European settlement.

Therefore apart from alpine areas, New Zealand's landscape has been so thoroughly altered by pastoral farming, urbanisation, and exotic forestry that in lowland areas you can travel for many tens of kilometres and not see naturally occurring native biodiversity.

When it comes to New Zealand's freshwaters, the loss of biodiversity is even more extreme; around sixty percent of freshwater fish, as well as the only freshwater crayfish and mussel are listed as threatened with extinction. If that list wasn't bad enough, introduced trout have complete protection while at least four of the threatened native freshwater fish species are commercially harvested and none have any legal protection.

This proportion of threatened species is an unambiguous indicator of freshwater deterioration and is mirrored by trends from traditional chemical water quality monitoring. Most of the monitored lowland river sites fail bathing standards and almost all the 'state of the environment' measures of water quality from lowland lakes and rivers all over the country show that the health of New Zealand rivers and lakes are worsening, particularly over the last 20 years.

The only improvement in the last 20 years has been a reduction of some industrial inputs, but massive increases in fertiliser use have meant that the net change is one of decline as these nutrients inevitably end up in rivers and lakes.

Another indicator of the environmental performance of a country is how its freshwaters measure up in relation to human health. New Zealand Ministry of Health figures show that 18,000 – 30,000 people contract waterborne diseases annually and nationally 43% of monitored river sites regularly fail to meet bathing standards, and many of these fail because illness inducing, faecal pathogen levels are too high.

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Is New Zealand 100% pure or even clean and green?

The question many people have is how we compare internationally. However, freshwater global comparisons are difficult as there are few useful or accepted common measures to compare. Nevertheless, we can use the proportion of species listed as threatened in each country as their 'miners' canaries' to get an ecosystem level proxy for a countries environmental status.

With around 60% of freshwater fish species listed as threatened or extinct, New Zealand is far worse than the global average of around 37%. While on a par with South Africa, New Zealand is worse than Europe at 42%, Australia around 30% and the United States with 37% of their freshwater fish threatened.

Lakes are good for comparison because they are less variable than flowing water systems, they integrate all impacts and for them there are some globally comparable data available. The eutrophication (excess nutrient) levels of New Zealand's lakes clearly show that the lakes are significantly worse than Canada, level pegging with Europe but clearly in better shape than those in the United States.

Many deniers of freshwater impacts in New Zealand have cited a recent report from Yale University that placed New Zealand as second only to Iceland based on freshwater quality. However, further investigation of the detail of this report revealed it to be totally flawed. The flaws were numerous but for instance; of the 130 odd countries that were ranked, only half actually had any water quality data available for comparison, the rest were estimated. Another flaw was the massive discrepancies in spatial representation, for example; New Zealand submitted data from around 80 sites (1 site/3,000 km2), there were 11 sites from Australia all from the State of Victoria (1 site/692,000 km2), 11 from China (1 site/870,000 km2), and more than 500 from the USA (1 site/18,000 km2). Furthermore, no allowance was made for what purpose the data were collected for, for example half of New Zealand's sites were selected as pristine 'control sites' thus they are sites on rivers above any impacts.

The causes of the freshwater ecological crisis in New Zealand are similar to those worldwide, but the foremost impacts are the recent extreme changes in agriculture, the move from extensive sheep and beef farming to dairy production and the intensification of dairying. This farming intensification has been huge as indicated by the fact that in the last decade nitrogen fertiliser use has increased by more than 700%, that and the import of palm kernel has allowed for a sevenfold increase in the number of cows in the South Island and a more than 60 percent increase in production of milk solids per hectare.

The response from New Zealand's non-government organisations (NGOs) to environmental degradation has been impressive, and in total contrast to the abject failings of the government sector.

The response from central government has been almost totally unconstructive. The reduction in funding to the Department of Conservation (DOC) and increasing funding to departments encouraging environmental degradation like the Ministry of Economic Development (MED) has meant that there is no hope of reducing biodiversity loss. For example, of the 2788 threatened species in New Zealand, only 2% (61) have recovery plans, this is in stark contrast to the USA where 85% of threatened species have recovery plans.

At the same time as NGO groups are campaigning to save freshwater fish species in New Zealand the Ministry of Fisheries is 'managing' to extinction the commercial harvest of the threatened endemic longfin eel, and DOC administers the commercial fishing of 4 threatened species (4 of the 5 whitebait species). Another bizarre example of government ineptitude is the recent decision by DOC to allow commercial eel fishermen to harvest threatened endemic longfin eel in the South Island Conservation Estate.

Freshwater is undoubtedly New Zealand's most important asset and an accurate clean green image is crucial to the economic and environmental future. However we need to face the fact that the economy is but a tiny subset of the environment—not vice versa.

This country could easily be a high producing clean, green example of sustainability for the rest of the world but it will take courageous, knowledgeable leadership on ecological sustainability, and a realisation of the true value of healthy intact ecosystems—now and for future generations.

Mike Joy

Dr. Mike Joy is the director of the Centre for Freshwater Ecosystem Management and Modelling and a senior lecturer in Environmental Science and Ecology at Massey University in Palmerston North, New Zealand.

PestSmart update

The Invasive Animals CRC will be conducting a national PestSmart Roadshow in the first half of 2012. The information roadshow will showcase best practice pest animal management, including the latest innovations, brought to you by the species experts. The dates of the roadshow can be found below.

The IACRC will be test driving the roadshow format and key messages at a symposium at this year's AWMS conference on Tuesday November 29. Please come along and review the symposium and provide your honest feedback.

Roadshow Calendar

The Invasive Animals CRC is bringing the PestSmart Roadshow to a place near you.

It will showcase best practice pest animal management including the latest innovations brought to you by the species experts.

Mark the date in your calendar now. Venue details to come later.
For more information, see: *www.feral.org.au/pestsmart*

JANUARY 2012

Monday 30th	QUEANBEYAN, NSW (National Launch)

FEBRUARY 2012

Wednesday 1st	FORBES, NSW
Friday 3rd	ALBURY, NSW
Tuesday 7th	NARACOORTE, SA
Wednesday 8th	HORSHAM, Vic
Friday 10th	MILDURA, Vic
Tuesday 14th	PORT AUGUSTA, SA
Thursday 16th	PORT LINCOLN, SA
Monday 20th	CARNARVON, WA
Wednesday 22nd	KOJONUP, WA
Friday 24th	ESPERANCE, WA
Tuesday 28th	BOURKE, NSW

MARCH 2012

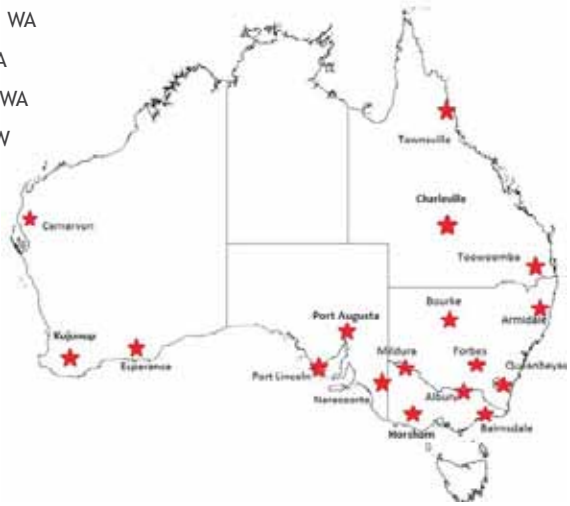
Wednesday 14th	CHARLEVILLE, QLD
Friday 16th	TOOWOOMBA, QLD
Tuesday 20th	ARMIDALE, NSW

APRIL 2012

Tuesday 17th	BAIRNSDALE, Vic

MAY 2012

Tuesday 1st	TOWNSVILLE, QLD



No Roadshows are planned for Tasmania or the Northern Territory but we will be bringing PestSmart to AgFest 2012 and attending various NT events.

The PestSmart Roadshow is carried out in conjunction with our partners Australian Wool Innovation Ltd, Meat and Livestock Australia and the Murray-Darling Basin Authority.

The PestSmart toolkit is funded under the Australian Bureau of Agricultural and Resource Economics and Sciences

Strategic Vertebrate Pest Management Training in Australia

Pest management training in Australia has historically been conducted mainly "in-house" within the authorities charged with managing pest species. Much of this training concentrated on techniques for removal or eradication of the pest species with little emphasis on strategic planning. There was limited structured training available, especially to people not employed by a pest control agency. A notable exception to this was the South Australian Vertebrate Pest Control Authority which commenced a pest management course in the 1970's, which subsequently morphed into a course taught through the University of Adelaide. In 1991, the Bureau of Rural Sciences in conjunction with the state pest agencies reviewed past practice and subsequently developed the series on Managing Vertebrate Pests (rabbits, pigs, goats, wild dogs etc). This series included an initial publication which set out the principles and strategic approach which has been the basis for much of the current approach to managing pests. This emphasised a need for focussing more on managing the damage that pests cause rather than reducing pest density per se.

By 2009 many of the experienced pest managers had either retired or were approaching retirement age and the level of retained corporate knowledge on pest management was beginning to decline. As a result the Invasive Animals Cooperative Research Centre (IA CRC) commissioned a scoping study for the national Vertebrate Pests Committee (VPC) into training and capacity building in vertebrate pest management. The Brown Report (Brown and Munckton 2010) found that pest management training in Australia was in a parlous state with a large variation in the quality and management level of pest management training across the country. While competencies exist for vertebrate pest management training at the vocational level, they are mainly at the certificate level in the Conservation and Land Management package. For example, only 2 of the 7 TAFE (Technical and Further Education) campuses in South Australia that offer the Diploma in Conservation and Land Management also offer vertebrate pest management units (Brown and Munckton 2010). This restriction to the lower levels probably reflects the lack of qualified and experienced trainers in this field. Brown and Munckton recommended, and the VPC endorsed, the need to develop a national training strategy focussing on vertebrate pest training at the VET (Vocational Education and Training) level and that this should include articulation from VET into the university system and should also utilise a mixed mode delivery approach.

A similar lack of appropriate training has been identified at the university and graduate level both in Australia and worldwide. There are few undergraduate courses specialising in vertebrate pest management. Occasionally vertebrate pest management is taught as a short module within an undergraduate unit but generally it consists of a single lecture. This has contributed to a wide gap between the skills that are taught at university and those that are required in the workplace as found by Muir and Schwartz (2009).

The VET Diploma in Conservation and Land Management or CLM (Specialising in Vertebrate Pest Management) was offered for the first time through the University of Canberra College (UCC) in 2007. The course is based on the principles of the Australian Pest Animal Strategy and introduces students to vertebrate pest management using case studies from on-going pest animal programs. Students are encouraged to bring a pest management problem from their workplace and to develop a plan to manage their own pest problem as the course progresses.

To overcome the training deficiencies noted by Brown and Munckton (2009), the University of Canberra (UC) with funding assistance from the IA CRC and ABARES is developing a suite of courses that complement and build on the VET Diploma of Conservation and Land Management (Specialising in Vertebrate Pest Management). A number of short courses are being developed that will allow the delivery of targeted courses to people and organisations unable to send staff to the VET or graduate level courses. Negotiations are currently underway to allow participants in these short courses to be awarded a nationally recognised Certificate of Achievement based on the completion of some of the core competencies of the CLM training package.

The University of Canberra offered a Graduate Certificate specialising in vertebrate pest management in 2010. This course is based on the CLM training package and the principles of the Australian Pest Animal Strategy and taught at a graduate level. Many of the pest management concepts taught in the Graduate Certificate will be enhanced through the use of scenario based learning computer software (SBLi) where students work through an online scenario based on a real pest management problem and apply the knowledge they have gained from the course.

The Graduate Certificate is currently being expanded through the development of both Graduate Diploma and Master of Science level courses. The courses are to be offered in a modular format where each of the lower level courses is fully subsumable into the higher level course. The courses are to be taught predominantly online with intensive residential components to allow face to face teaching of more complex elements. To ensure that these courses are applicable to the needs of the workplace, units on Geographic Information Systems (GIS), research methods, statistics and potentially, policy development and project management have been included in the course. A research project at the Masters level will allow successful graduates from the course, a pathway into doctoral studies. These higher level graduate courses are currently under development and it is hoped to have them open for intake of students in the second half of 2012.

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Strategic Vertebrate Pest Management Training

A number of pest management education packages have also been prepared for primary (years 5 and 6) and secondary (years 8, 9 and 10) level students. These teaching packages were developed in accordance with the school science curriculum and contain all the necessary teaching material to allow the teacher to run the lessons without large amounts of background research and reading. Many of these packages utilise the SBLi software allowing students to access and complete the units using either the schools computer facilities or their home computers. The packages were prepared by Jo Keogh and are freely accessible through the www.feral.org.au website (see Education and Training on the homepage).

Through providing a range of courses on pest management, the University of Canberra in conjunction with the Invasive Animals Cooperative Research Centre is starting to redress the deficiencies in pest training identified in the Brown and Munckton (2010) report.

Further information on the short courses or the VET level course can be obtained from Mike Braysher (mike.braysher@canberra.edu.au) or David Walter (david.walter@canberra.edu.au). Information on the graduate level courses can be obtained from Tony Buckmaster (Anthony.buckmaster@canberra.edu.au).

Article provided by Tony Buckmaster and Mike Braysher from the Institute for Applied Ecology, and the Invasive Animals Cooperative Research Centre, University of Canberra.

Brown M and Munckton C (2010) 'Scoping study on training and capacity building in vertebrate pest management.' A report to the Invasive Animals Cooperative Research Centre and Industry and Investment NSW.

Muir MJ and Schwartz MW (2009) Academic research training for a non-academic workplace: a case study of graduate student alumni who work in conservation. Conservation Biology 23, 1357-1368.

Australian Veterinarians for Animal Welfare & Ethics

The AVAWE (Australian Veterinarians for Animal Welfare and Ethics) is a special interest group of the Australian Veterinary Association, their objectives include promoting all aspects of animal welfare and ethics within the Australian veterinary profession with regard to the use of animals for companionship, work, food, clothing, research, teaching, recreation, entertainment and sport, as well as feral and wild animals. They also provide a forum for consultation and education on animal welfare and ethics with the veterinary, animal welfare, scientific, political and educational communities. You must be a member of the Australian Veterinary Association to join the AVAWE but their newsletters can be found at http://www.ava.com.au/node/1203 or for more information contact their vice-president and newsletter editor, Tanya Stephens: tanya7stephens@gmail.com

AWMS Conference 2011

Citigate Mount Panorama, Bathurst NSW

Tuesday 29 November - Thursday 1 December

Theme: Communities and Wildlife Management

Offering Eight Symposia:

- Putting science into practice to make wildlife management work
- Local wildlife management in the Blue Mountains and Central West NSW
- Communication of science in wildlife management
- Contemporary issues in wildlife management: managing wildlife at the centre of public debate
- Managing the impacts of wildlife and pest species in urban and peri-urban environments
- Animal behaviour and it use for managing wildlife
- Diseases of wildlife: interactions with human values and biodiversity
- Pest control strategies: Are they more important than silver bullets?

A range of social functions

- An evening tour of the Australian Fossil and Mineral Museum
- Conference Dinner
- Post-Conference to either Jenolan Caves or Hills End

Access the website for updates and registration information

Spotlight on student research

Dasyurid Biology by Hayley Stannard, PhD Candidate

Dasyurids, or carnivorous marsupials, include the well known Tasmanian devil (*Sarcophilus harrissi*), quolls, phascogales and dunnarts. Many Australian native fauna, including the dasyurids, have suffered since European settlement due to activities such as land clearing, agricultural land use, urbanisation and hunting. My PhD investigates the biology of six dasyurid species, including the kultarr (*Antechinomys laniger*), red-tailed phascogale (*Phascogale calura*), eastern quoll (Dasyurus viverrinus), spotted-tailed quoll (*D. maculatus*), fat-tailed dunnart (*Sminthopsis crassicaudata*) and stripe-faced dunnart (*S. macroura*).

My PhD encompasses studies on diet, nutrition and haematology of the six dasyurid species. I have undertaken a study as part of my PhD to determine the dietary preference of translocated red-tailed phascogales in Alice Springs (Stannard et al. 2010). The study found that post-release, animals were able to catch a range of prey items, from insects to small mammals, birds and reptiles. Therefore; released red-tailed phascogales were able to survive and catch their own food at the release site, suggesting suitability for translocation in that area.

Nutritional studies aim to determine the daily nutritional requirements and nutritional composition of captive diets for each dasyurid species. Currently I am working on writing up the nutrition studies for publication. At this time I have found captive diets provide a range of nutrients with varied digestibility. Providing a diet with varied digestibility and different food types ensures captive animals are receiving adequate nutrition. Live food also provides behavioural enrichment for captive animals and reduces stereotypical behaviours. Haematology studies aim to investigate the haematology and blood chemistry levels of captive eastern and spotted-tailed quolls. The research will help assess the health and condition of captive individuals and aid in captive management of the species.

The research I am conducting will contribute to the current knowledge base of these six dasyurid species and enhance captive management techniques. The animals being used for this research are from ex-situ populations which are used for research and captive breeding. There are future intentions to translocate red-tailed phascogales and eastern quolls. The purpose of this research is to support wildlife managers with the captive maintenance of dasyurids; in addition to supporting the use of captive dasyurids for reintroduction and translocation programs. Optimising captive health and reproductive output ensures animals are healthy and there are maximum numbers of animals to increase the success of translocation programs.

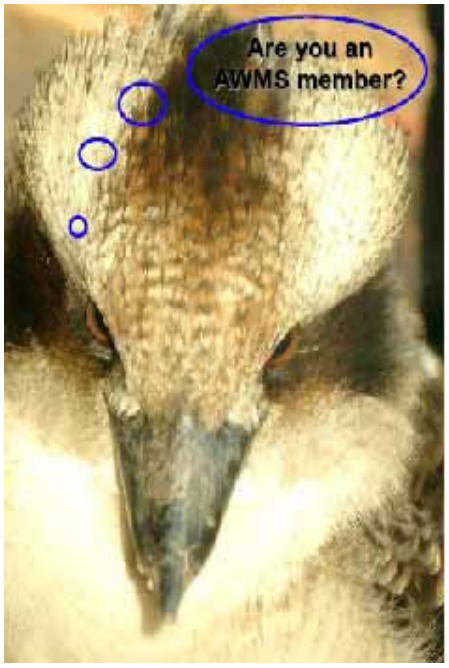
A kultarr (*Antechinomys laniger*)

A red-tailed phascogale (*Phascogale calura*)

Future aspirations

I have an interest in the conservation of mammals and would like to continue working in this area. I particularly enjoy researching physiology and ecology of species to improve current knowledge and aid species conservation. I will be completing my PhD this year and whilst I am keen to continue research in this area, I also aim to broaden my research into new areas. I hope to take up a position as a postdoctoral research fellow upon completion of my thesis.

Stannard HJ, Caton W and Old JM (2010) The diet of red-tailed phascogales (*Phascogale calura*) in a trial translocation at Alice Springs Desert Park, Northern Territory, Australia. *Journal of Zoology* **280**, 326-331.



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