

# **Establishment of the Wildlife Health and Conservation Centre in the University of Sydney Faculty of Veterinary Science**

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## **Wildlife Rehabilitation Conference Penrith 2004**

### **Introduction**

There is growing awareness within the general and scientific communities, both in Australia and overseas, of the urgent need to conserve and protect our unique native animals, and Australia is yet to establish a world class scientific, teaching and veterinary medical centre devoted to the health, welfare and conservation of native fauna.

Funding of \$2.2 million from the federal Sustainable Regions Program, secured through the University of Sydney Veterinary Science Foundation, is enabling the Faculty of Veterinary Science to establish such a facility, the Wildlife Health and Conservation Centre (WHCC), on its Camden campus. This will be an Australian first and one of only a small number of University-based veterinary wildlife centres in the world.

The development and implementation of the plan to establish the WHCC is the culmination of over 30 years of teaching and research on wildlife topics in the Faculty of Veterinary Science. The Centre will become the focus for these activities, which have been given fresh impetus with the putting in place of a new undergraduate curriculum in 2001. There was little formal wildlife material presented in the old curriculum, although a number of staff members did incorporate a little in existing courses when this was possible. There were certainly a significant number of veterinarians who gained experience and competence after graduation in working with wildlife, and many of these have worked closely with wildlife carers. In this regard the six wildlife courses conducted by the University of Sydney's Post-graduate Foundation in Veterinary Science (PGF) deserve special mention, with the Proceedings from these courses, conducted between 1978 and 2000, being a marvelous repository of information on all aspects of Australia's native fauna.

With the new curriculum came an opportunity to incorporate a significant Unit of Study dealing with the conservation and management of wildlife, as a part of the process of defining roles for veterinary graduate in these endeavours. It was accepted that this meant looking beyond the care and treatment of sick animals, although this was still important core business. This defining of broader opportunities in fact commenced some years previous to 2001, when the Australian Veterinary Association (AVA) established a wildlife Special Interest Group (SIG) alongside all the other SIGs that dealt with cattle, sheep, pigs and so on. Consideration of all the possible roles for veterinarians lead to the use of the term "veterinary conservation biology (VCB)", with the SIG being called the Australian Association of Veterinary Conservation Biologists (AAVCB). AAVCB was established in 1993 and remains a very active group within the AVA, with one of its principal tasks being to assist the parent body in the development of relevant policies.

## Undergraduate program

Thus, in looking at what should be dealt with at undergraduate level in the new curriculum a Unit of Study called Veterinary Conservation Biology was developed (VETS2015). The discipline of VCB can be considered for convenience in 5 sections, although there are some overlaps:

1. *Wildlife health.* This encompasses the health and welfare of both captive and free-living wildlife, including those sick, injured or orphaned animals in the hands of carers and their veterinarians. In recent times there has been an emphasis on the concept of ecosystem health, and the term “conservation medicine” is now used in the consideration of the health of wild animals and its relationship to human health and livestock health. This is a rapidly expanding field, with a good recent example being establishment of the Australian Wildlife Health Network (AWHN) under the inspired leadership of Dr Rupert Woods.
2. *Conservation of endangered animals.* This includes both *in situ* and *ex situ* activities, as may be perceived as being necessary for small or declining populations of endangered species. Wildlife managers and veterinarians working in teams are dealing with a wide range of species, with Species Management Plans and other programs seeking to stabilize and rejuvenate populations of such species. In Australia this may include programs to control introduced predators such as the fox and the feral cat, coupled with translocation. When translocation is used there must be proper consideration of the manner in which wild animals are captured, handled and transported. Captive breeding and re-introduction programs are also an essential part of this process for many species, with success stories in Australia being the chuditch (western quoll) and the woylie (brush-tailed bettong) in WA. In this process there is an increasing use of powerful tools such as enhanced reproduction technologies (ERT) and conservation genetics.
3. *Sustainable farming and off-reserve conservation.* There is now an understanding of the urgent need to find more sustainable ways to use our natural resources, including our water. The effects of habitat destruction or fragmentation are all too apparent, as are widespread erosion, salinisation and loss of wetlands. Veterinarians are now being urged to look at the whole farm when giving advice on the management of flocks and herds of domestic animals, including vertebrate pest control and conservation of biodiversity on private lands. Every rural veterinarian will find themselves increasingly involved with such activities, usually as a member of a multi-disciplinary team. Programs like Landcare and Rivercare will provide the context for some of this work.
4. *Sustainable use and stewardship of wildlife.* All major conservation agencies accept that sustainable use of wildlife has a place in the conservation of biodiversity, provided that certain criteria are met. The critical issues are biological factors (sufficient knowledge of a population to ensure that utilization is truly sustainable), animal welfare, socio-cultural issues and legislative support. Case studies like the kangaroo harvesting industry and crocodile farming are used to illustrate the pros and cons of sustainable use. Ecotourism in all its forms is also examined.
5. *Import and export of wildlife.* There are significant quarantine issues in the legal importation of wildlife for whatever reason, which when coupled with our obligations under treaties like CITES create a large task for AQIS and related agencies. The illegal trade in wildlife and its parts is clearly of major concern, both in terms of attempts to smuggle our unique wildlife out of Australia and the import of exotic species.

In the Second Year of the undergraduate program these matters are dealt with in the Unit of Study VETS2015 that provides 4 Credit Points for that year. Assessment includes completion of a major essay on a relevant topic. The Wildlife Clinic within the WHCC will then provide clinical experience in the care and treatment of native animals, as a part of Fifth Year student rotations. The intention is to ensure that veterinarians graduating from the University of Sydney have a good understanding of the biology, management and status of our fauna, and an appreciation of the skills and knowledge required to deal with sick and injured native animals.

## **Post-graduate programs**

There are two course work post-graduate programs in the Faculty of Veterinary Science: the Master of Veterinary Studies in Wildlife Medicine and Husbandry, and the Master of Applied Science (Wildlife Health and Population Management). The former has been offered since 1980, and is essentially a zoo Residency. A significant number of current zoo veterinarians in Australia have completed this degree. The second Masters has been offered since 2001, and complements the undergraduate Unit of Study in VCB. This is coordinated jointly by the Faculty of Veterinary Science and the School of Biological Sciences, providing an opportunity for veterinarians, biologists and environmental sciences to work together in a team environment. It is a 3-tiered program (Graduate Certificate, Graduate Diploma or Masters). Non-degree candidates can work towards a Certificate of Attainment in specific WILD Units of Study (eg. WILD 5003 Wildlife health, WILD 5004 Vertebrate pest management or WILD 5007 Sustainable use and stewardship of wildlife). Information on this program is at [www.vetsci.usyd.edu.au/wild](http://www.vetsci.usyd.edu.au/wild)

There are also research degree programs (BSc(Vet), MVSc and PhD) on offer on a wide range of wildlife topics.

## **WHCC Partners**

The Faculty is establishing the Centre as a key national focus for teaching and research in veterinary conservation biology, with some emphasis on conservation medicine and the health and welfare of our native fauna.

It is envisaged the WHCC will become not only a focus for all wildlife-related activities within the Faculty and the wider University of Sydney, but that it will develop and foster relationships with relevant government and non-government organizations and the community for the purposes of research, education and the provision of clinical services.

The Faculty is seeking external partners able to provide additional expertise in the fields of agricultural, terrestrial and aquatic biodiversity. It is currently working towards the inclusion of aquatic animal health in the undergraduate curriculum, and a number of the Wildlife Health and Population Management Masters projects have already focused on aquatic habitats.

The Faculty is a partner in the Pest Animal Control CRC, and organizations already in support of the WHCC include the Zoological Parks Board of NSW, National Parks and Wildlife Service (NPWS), NSW Agriculture and wildlife carer groups. Excellent potential also exists for an effective working partnership with the newly established, federally-funded Australian Wildlife Health Network, currently located at Taronga Zoo.

## **What the Centre will do**

The WHCC will be multifaceted and seek to provide the following:

- Education and training in conservation medicine through the WHCC's Wildlife Clinic. This will involve clinical training of veterinary students and continuing education for veterinarians.
- Research on all aspects of wildlife conservation and management. In addition to the Masters program, the Faculty of Veterinary Science has significant staff strengths in wildlife disease, pathology, epidemiology, reproduction and conservation genetics. All these projects will link with the Centre.

The location of this facility within the Camden area will provide a unique opportunity to contribute to the sustainability of the local environment and its wildlife, and to other areas outside the metropolitan area, including the Nepean River system.

- Wildlife veterinary clinical and rehabilitation services. It is envisaged that this service, for both injured wildlife and wildlife in the care of licensed carers, will be undertaken in conjunction with the existing facilities of the University Veterinary Centre at Camden. Partnerships with WIRES and other community carer groups are being formed to foster volunteer support for this service.
- Vocational training. The WHCC will provide training as required by community carers and wildlife professionals such as National Parks and Wildlife Service and municipal council rangers, and zoo personnel.
- Ecotourism and public education programs. An important role for the WHCC will be the provision of education for the general public and for schools. Tours by a diversity of groups, which could include seminars and lectures, will be strongly encouraged, both to help the Centre become economically sustainable, and to raise public awareness of environmental and conservation issues.
- Seminars and conferences. Facilities (lecture theatre, seminar and small group teaching resources) are planned to enable the Centre to conduct seminars and conferences for a broad audience, from national and international veterinarians and wildlife professionals to the community.
- Consulting to government and the private sector. Members of academic staff currently provide expertise to national and international governments, and it is envisaged that the Centre will consult to both government and business on wildlife health emergencies and pest animal management.

## **Conclusion**

The Faculty of Veterinary Science Wildlife Health and Conservation Centre has the potential to become a significant national and international focus for biodiversity conservation and wildlife health. The Faculty is focused on facilitating partnerships with key institutions and organizations that will bring to each party the sharing of knowledge, physical resources and staff, and the opportunity to educate the community and raise public awareness on a diversity of conservation issues.