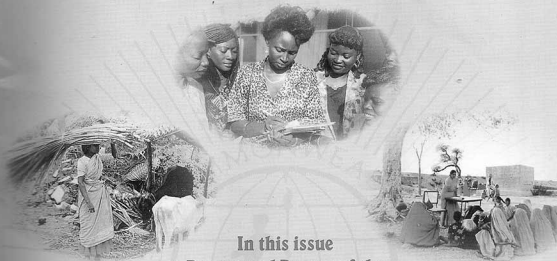


# COMMONWEALTH VETERINARY ASSOCIATION



In this issue  
Report and Papers of the  
Third Pan Commonwealth Veterinary Conference



# NEWS

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## The President's Message

*Dear Colleagues,*

*It is indeed a pleasure to report to you that the Third PanCommonwealth Veterinary Conference held in Wellington, New Zealand 27-30 June, was a resounding success. The quality of the scientific papers was first class, the venue spectacular, and the social events very enjoyable. As I said in my Opening Address this is the first time that a PanCommonwealth Veterinary Conference has been held in conjunction with another major conference and I want to thank again Warren Webber and his colleagues at the Foundation for Continuing Education for their assistance and in particular, the work done on the CVA Scientific Session by the late Professor Bill Manktelow. During and following the Conference many delegates commented on the timeliness and quality of the scientific program. It is very unfortunate that Prof. Manktelow was not there to share in its success.*

*CVA must also thank its Corporate Member, Nestle Purina Petcare Company, for their generous financial support. This is the 7th year that they have been associated with CVA conferences/workshops and projects and we look forward to working with them in the future.*

*International Aid Agencies in Australia, Canada, New Zealand, and the Technical Centre for Agriculture and Rural Cooperation provided substantial financial support. There were 67 CVA delegates from 37 countries represented. In total there were 600-plus people registered. Of particular note was the outstanding representation from Fiji, where all but one or two veterinarians attended.*

*Pre and post-Conference CVA Executive Committee meetings were held to review activities over the past year and to plan for the coming year. A CVA Council meeting, with a record number of Councillors present, was held during the Conference.*

*The CVA Officers met jointly with the Presidents of the British Veterinary Association (Peter Jinman), Canadian Veterinary Medical Association (Jeanne Lofstedt), Australian Veterinary Association (Joanne Sillince), and the new President of the New Zealand Veterinary Association, Chris Hutchings. The organization of the CVA and its programs and projects were reviewed and strategies for communicating results of its activities were discussed.*

*This will be my last opportunity to express my appreciation to the many CVA members who have welcomed and looked after me on my visits to their countries. The past three and a half years have had their challenges but, by far, there have been more "ups" than "downs". We have had a lot of "firsts" and our CVA programs and projects are expanding. Our relationship with the Commonwealth Foundation continues to be sound and our business approach to our activities is paying off. I will be leaving office knowing that the Commonwealth Veterinary Association is on the right track and that the future is bright.*

*I want to thank my colleagues on the Executive Committee for their support and friendship. If I have learned anything from my years with CVA, it is that the veterinary profession is made up of caring and friendly people, regardless of country of origin.*

*There are a number of people who have provided advice and support during my term of office: our gregarious Past President and Treasurer, Dr Bill Pryor and our more quiet but equally capable Secretary/Editor/acting Programme Director, Dr S.A Rahman, and of course their spouses, Ann and Shireen. I want to thank my wife Margaret for her understanding and putting up with a husband that was often pre-occupied or away and, finally, to my employer, the Canadian Food Inspection Agency.*

*Perhaps the highlight of our final Executive Committee meeting was the election of Dr Robin Yarrow, Regional Representative for the Australasia/Oceania region, as the next CVA President. As many will know Robin has had a distinguished career both within and outside the veterinary profession. He is highly respected and acknowledged as a leader. CVA is in good hands!*

*Thanks and best regards,*

*July, 2003*

**Bert Stevenson**  
President

## Death of Professor Bill Manktelow

The death occurred on 3<sup>rd</sup> May, 2003 of Professor BW (Bill) Manktelow at his home in Palmerston North, New Zealand. Apart from a full and very successful career in veterinary science and education, which has been described in VetScript, July 2003 and in the New Zealand Veterinary Journal, Bill had been a most valuable colleague in aiding the work of the Commonwealth Veterinary Association.

As recently as August 2002, the Officers of CVA had gone to New Zealand to commence work to mount the Third Pan Commonwealth Veterinary Conference (PCVC3) in the association with the New Zealand Veterinary Association. The Officers had met with Bill and sought his concurrence to become the Programme Director for CVA for the Conference. From that time until his untimely death, he played a leading role in preparing the programme and identifying suitable guest speakers. He also exhibited very sound judgment on a number of organisational matters.

The CVA Officers met with him again in New Zealand in January this year and did have the opportunity to say to him what an excellent job he was doing for the Conference and how we were all looking forward to having his participation at PCVC3 in June. It was with the greatest regret that CVA



Prof BW (Bill) Manktelow

learned of his death before that anticipated event could take place.

Bill Manktelow was a person of the highest professional standing, generous with his time, and totally committed to the advancement of veterinary science in all its guises.

For myself, the association with Bill goes back to the 70s when I was Dean at the Massey Veterinary School and he was a senior professor. I cannot speak too highly of his professionalism and commitment. I am personally greatly honoured to have known him since that time and to have had this further close link with him in 2002-03 as he so willingly served CVA even after completing his formal academic career.

CVA extends to his wife Pam, his four children and three grandchildren its most profound sympathy on their sad loss.

2 July 2003

WJ Pryor

## CVA News

### Third Pan Commonwealth Veterinary Conference

27<sup>th</sup> - 30<sup>th</sup> June 2003, Wellington, New Zealand

After the first two successful Pan Commonwealth Veterinary Conferences held in Harare, Zimbabwe and Bangalore, India during 1991 and 1998 respectively, the third one held at Wellington, New Zealand between 27<sup>th</sup> and 30<sup>th</sup> June 2003 was a grand success.



*Traditional Maori Welcome to President CVA*

The most important feature of the conference, from the CVA point of view, was the large gathering of the Veterinarians from the Island Nations of the Pacific/Oceania region which gave them, for the first time, an opportunity to rub shoulders with the elite of the profession from all over the world. It would be to the credit of the CVA and the agencies that have supported it to have a representation from all the islands in the region including the strife torn Solomon Islands and the most recent free country in the region, East Timor.

It would not be an exaggeration to say that never before in the history of Australasian/Oceania region has there been a scientific programme so well planned by the CVA to cover the most important issues facing both the developed (Australia, New Zealand) and the developing countries of the region.



*Traditional Maori Welcome*

The scientific programme was designed to meet the needs of both the host country veterinarians as well as the overseas ones.

Out of a total of nearly 600 delegates who registered themselves, more than 100 were from abroad from 40 nations representing all the continents of the world.



*Hon'ble Minister Mr. Jim Sutton (left) with Dr Bert Stevenson, President, CVA (right)*

The Conference itself was inaugurated by the Hon. Jim Sutton; Minister of Agriculture and Minister of Trade Negotiations, Govt. of New Zealand. He also addressed the delegates on important issues concerning Animal Welfare and Trade. The inauguration was preceded by a traditional Maori welcome and a welcome by the President of the NZVA Dr Lewis Griffiths. The President of the CVA Dr Stevenson gave the presidential address.



*A section of the audience*



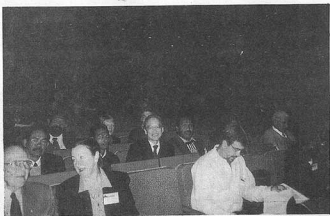
*Hon'ble Minister Mr. Jim Sutton*



*Dr Bert Stevenson*



*Dr. Lewis Griffiths*



*A section of the audience*

*L-R: Drs WJ Pryor, Aziz Saharoe, Siosifa Fifita, Joanne Sillince, Alipio, Giam, Baddley Anita and Gus Renda*

The scientific programme covering three days and having five simultaneous sessions was so designed to give an opportunity to everyone attending to have access to their special interests. The important themes addressed were Food Safety and Biosecurity, Companion Animal, Vet. Biz, Industry, Animal Nutrition and Plenary Sessions. Animal welfare issues in Large Animal and Poultry, Nutritional Importance of Diets, Emerging Diseases in Canada, South Africa and Australia and how they could be a source of calamity in view of the recent disasters in UK with BSE and Foot and Mouth not to mention the human SARS. Food Safety Legislation in smaller countries and their export potential in view of the WTO and GAT treaties.



*A section of the audience*



*Dr WJ Pryor, Treasurer, CVA (left) with  
Dr Joanne Sillince, President AVA*

Keeping in mind the present trends and future implications, issues such as "Women's issues in Veterinary Profession" were also discussed.

Among the speakers mention should be made of Mike Rickard, Richard Whittington, Steven Cornelius, Veronica Burnham, Michael DeShield, David Banks, Joeli Vakabua, Joanne Sillince, Linda Fleeman, Avi Deshmukh who were the specialists in their own fields, who gave excellent presentation which were highly appreciated by the audience.



*Dr Ramzee, CVA Councillor, Pakistan with  
Dr Kakoyannis, RR, UK/Mediterranean  
At the back from right Drs Veronica Burnham, Dingle  
Foote, Fofana, Michael DeShield and Gus Reader*



*A section of the audience*



## CVA Booth at the Conference Exhibition

The CVA had a stall exhibiting its activities and merchandise which was also shared by the Pacific Island Nations who displayed the literature and activities of the region through posters.



*L-R: Peter Saville, John Fernandes, Bill Pryor, Ann Pryor, Shireen Rahman and Razma Saharee*

## Gala Dinner



*Dr Bert Stevenson (right) presenting a memento to Dr Chris Hutchings*

The New Zealand Veterinary Association hosted a gala dinner on 28<sup>th</sup> June 2003 at the Wellington Town Hall. The social event was a great success with a number of New Zealand veterinarians being honoured on the occasion.

Dr Bert Stevenson, President CVA addressed the gathering and thanked the NZVA for organising the Third Pan Commonwealth Veterinary Conference and for its hospitality towards the international delegates from 37-countries attending the conference.

As a token of appreciation a memento was presented to the newly Elected-President of NZVA, Dr Chris Hutchings.

## CVA Officers Meet Presidents of National Associations

A meeting of the CVA Officers with Presidents of the British Veterinary Association, Peter Jinman; Canadian Veterinary Medical Association, Jeanne Lofstedt; Australian Veterinary Association, Joanne Sillince and the New Zealand Veterinary Association, Chris Hutchings, was held on 29<sup>th</sup> June 2003 at the

Conference Centre. Dr Bert Stevenson, President CVA, Dr WJ Pryor, Past President/Treasurer CVA and Dr S Abdul Rahman, Secretary CVA represented the CVA. Dr Murray Gibbs, CVO, NZVA was also present.

The organization of the CVA and its programs and projects were reviewed and strategies for communicating results of its activities were discussed.



*L-R: Drs Murray Gibbs, Peter Jinman, Chris Hutchings, Jeanne Lofstedt, Joanne Sillince, Bert Stevenson, WJ Pryor and Rahman*



*The Presidents with CVA Officers*

## Regional Meetings of CVA

The Council Members and Regional Representatives of the six-regions of the CVA took the opportunity of their presence at the Third Pan Commonwealth Veterinary Conference at Wellington, New Zealand from 27-30 June 2003 to hold their mini-regional meetings (as all council members were not represented) and discussed issues pertaining to their region.



*Asian Region*

*L-R: Drs Ramzee, Herath, Rahman, Mohiuddin and Shaktivale*



*Australasia/Oceania Region*

*Sitting (L-R): Drs Helen Boban, Robin Yarrow, Jeff Cave and Baddley Anita*  
*Standing (L-R): Drs Giam, Fiftia, Atipio, Ingi Puana, Aziz Saharee, Gavin Struthers, Fa'afetai Fata, Bert Stevenson and WJ Pryor*



*Canada/Caribbean Region*

*Sitting (L-R): Drs Veronica Burnham, WJ Pryor and Tracey Challenger*  
*Standing (L-R): Drs Collin Boyle, John Fernandez, Michael DeShield, Gavin Peters, Gus Reader, Dingle Foote and Bert Stevenson*



*ECS Africa Region*

*L-R: Drs Jannally, Patrick Chikungwa,  
Gareth Bath, William Ogara, Samuel Okech  
and Goodoyal*



*West Africa Region*

*Drs Rohman, WJ Pryor, Bakary Touray,  
Suu-Ire, Fofana and Bert Stevenson*



*UK/Mediterranean Region*

*L-R: Drs Kakoyannis, Stephen Pointing and WJ Pryor*

## Executive Committee Meeting of CVA

28<sup>th</sup> June 2003, Wellington, New Zealand

The meeting of the Executive Committee of CVA was held at Wellington, New Zealand on 28<sup>th</sup> June 2003. Drs Bert Stevenson, President; WJ Pryor, Past President/Treasurer; SA Rahman, Secretary and RR Asia; Robin Yarrow, RR Australasia/Oceania; Veronica Burnham, RR Canada/Caribbean; WO Ogara, RR ECS Africa; Richard Suu-Ire, RR West Africa and Charalambos Kakoiyannis, RR UK/Mediterranean participated.

Dr. Bakary Touray, Past President, CVA, Dr. Jaumally, Former Regional Representative, ECS Africa, Dr. Jeanne Lofstedt, President, CVMA were invited to attend the meeting as special invitees.



*Members of Executive Committee of CVA*

*Standing L-R: Drs Richard Suu-Ire, Bakary Touray, Ogara, Mrs. Herath, Kakoiyannis and Rahman*

*Sitting L-R: Drs Pryor, Robin Yarrow, Bert Stevenson and Veronica Burnham*

The agenda discussed included the organisation of the current PanCommonwealth Veterinary Conference, workplan, projects to be undertaken in different regions and the schedule of various conferences and workshops to be held during the next four years. The minutes of the meeting will be published in the next issue of the CVA News.



*Executive Committee Meeting in progress*



*Executive Committee Meeting in progress*

### East Timor as an Associate Member

East Timor is to be admitted as an Associate Member of CVA in the Australasia/Oceania Region. The Executive Committee of CVA formally has invited East Timor to join the CVA.

## New Officers Of Commonwealth Veterinary Association

The meeting of the Executive Committee of CVA was held at Wellington, New Zealand on 28<sup>th</sup> June 2003, the following were unanimously elected as officers of the CVA for the period of four years w.e.f. 1.1.2004.

Dr. Robin Yarrow (Fiji)	- President
Dr. S. Abdul Rahman (India)	- Secretary/Editor
Dr. W.J. Pryor (Australia)	- Treasurer
Dr. Bert Stevenson	- Past President

Dr Robin Yarrow was the CVA Council Member, Fiji and Regional Representative, Australasia/Oceania Region, Dr. Bert Stevenson, the President, Dr. W.J. Pryor the Past President/Treasurer continues as Treasurer and Dr. S. Abdul Rahman continues as the Secretary.

### President, CVA

**Dr Robin H Yarrow** graduated as a veterinarian from University of Sydney in 1968 and has a diploma of Animal Health from London. He served the Government of Fiji from 1969-99 in various capacities not only on veterinary affairs but as a high-ranking official representing the Fiji Government in various capacities. He has worked as Director and Permanent Secretary in the Ministry of Agriculture, Counsellor at the Embassy of Fiji in Brussels, Permanent Secretary for Tourism, Civil Aviation and Meteorological Services, Permanent Secretary for Foreign Affairs, Ambassador of Fiji to Japan and Permanent Secretary for National Planning.



*Dr Robin Yarrow*

In addition to this, he has been on many Boards and Committees including University of South Pacific Council (USP), chair of Forum Fisheries Committee, chair of South Pacific Environment Programme (SPREP), Inter-governmental Committee, Fiji Museum Board of Trustees.

He has worked as a Consultant for many organisations and government agencies which included Review of SPC's Agriculture Programme, Review of Pacific Islands Centre, Tokyo, Drafting of Small and Micro Enterprise Policy Framework for Fiji, Facilitation of National Biodiversity Action Plan for Dept of Environment, Fiji Government. Reviewed a Draft Land Use Policy for Fiji on behalf of GTZ and reviewed the Foreign Service of Fiji Government (2001).

Dr Yarrow has also been professionally active and has been the President of Fiji Veterinary Association and a Council Member of Fiji to the CVA and RR Australasia/Oceania Region.

### Past President, CVA

**Dr. Robert Gordon Stevenson** graduated from Ontario Veterinary College with a DVM in 1963 and had his post graduation with a diploma in Veterinary State Medicine in 1964 from the Royal (Dick) School of Veterinary Medicine and PhD from University of Edinburgh as a Veterinary Pathologist in 1958. Dr. Stevenson has been active in veterinary associations having served as President of the New Brunswick Veterinary Medical Association (1971), President, Canadian Veterinary Medical Association (1975-76), and for the past 12 years has held various posts (vice-president, programme manager, CVMA representative) within the Commonwealth Veterinary Association. He was a founding member of the CVMA Research Trust Fund and presided over the introduction of the CVMA Pet Food Certification Program. He has been responsible for organizing the annual Atlantic Provinces Veterinary Conference since 1978. He has been the recipient of a Canadian Medical Research Council Fellowship and a Confederation Commemorative Medal in recognition of significant contribution to compatriots, community and to Canada. At present he is working as the Area Laboratory Network Director, Canadian Food Inspection Agency, Charlottetown, PE, Canada.



*Dr Bert Stevenson*

### Treasurer, CVA

**Dr. W.J. Pryor** who has been Council Member of Australia for 8 years, Regional Representative of Australia for 6 years and Secretary of CVA for 4 years and President of CVA and Past President and Treasurer for 4 years has now been



*Dr WJ Pryor*

elected as Treasurer. Dr. Pryor who hails from Scotsburn, Victoria is the former Professor and Dean of the Veterinary School University of Massey, New Zealand and former Dean of the Veterinary School University of Queensland. He is currently an international Veterinary consultant and is the Chairman of the Australasian Veterinary Schools accreditation Committee.

Dr. Pryor has held many important posts during the past. He has been President of the Australian Veterinary Association, President of the Australian College of Veterinary Scientists and President of the Australian Society of Animal Production.

Dr. Pryor has travelled extensively in South East Asia and the Pacific region where he has worked for many years to assist veterinary services and education. For this he has been awarded a D.Sc (h.c.) from Massey Univ. in 1988.

The British Royal College of Veterinary Surgeons (RCVS) honoured Dr. Pryor in 1992, making him an Honorary Associate, the fourth Australian in the two hundred years of its history. This was in recognition of his development of an international veterinary accreditation system and extensive assistance to veterinary communities in several developing countries.

Dr Pryor has been the recipient of many honours including the award of "Officer of the Order of Australia (AO)" in the Queen's Birthday Honours for Australia in 2001 and "Honorary Degree of Doctor of Science from University of Ballarat, Australia".

He has also been singularly honoured in 2001 at the VAM Conference by the Veterinary Association of Malaysia as the "Veterinarian of the Century" for his

contribution to the field of Veterinary Profession not only in Australia but to his commitment and work for the development of the profession throughout the Commonwealth, especially in the far East and Malaysia in particular. In addition to many others during his illustrious career which continues in the Commonwealth Veterinary Association.

He is married and his wife Ann also assists CVA programmes. He has five sons one of whom is also a Veterinary graduate.

## Secretary, CVA

Dr S. Abdul Rahman, Retired Dean of the Veterinary College, Bangalore, India has been associated with Commonwealth Veterinary Association as a Council Member from India and Regional Representative from Asia. He has been the Editor of CVA News since 1989 and has been the Secretary from 1996.



Dr S Abdul Rahman

Dr Rahman was the Secretary General of the Indian Veterinary Association for 11 years, from 1986 to 1994 and again from 1996 to 1998.

Dr Rahman is also a member of the OIE-Working Group on Animal Welfare and an invited member of the WHO-SEAR Committee on Rabies Control in Asia.

## Monkeypox confirmed in the USA

The first documented outbreak of monkeypox in humans in the western hemisphere has been reported by the Centres for Disease Control and Prevention (CDC) in the USA.

The CDC note that monkeypox is a rare, viral, zoonotic disease which usually occurs in the rainforest countries of Central and West Africa. The disease is caused by the monkeypox virus, which belongs to the orthopoxvirus group of viruses. It was first recovered from an African grey squirrel and subsequent laboratory studies showed that it could also infect mice, rabbits and rodents. In 1970, it was reported in humans for the first time.

The CDC's website stated on June 14 that a total of 81 people in the USA had been reported with suspected monkeypox and that the disease had been confirmed in nine. At least 14 people suspected of having the disease had been hospitalised, but there had been no deaths relating to the outbreak. The suspected cases were in Wisconsin (34), Illinois (19), Indiana (26) and Ohio (2).

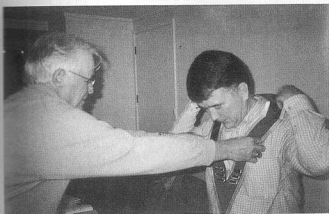
The CDC reported that, on the basis of preliminary investigations, it appeared that most of the patients became

ill after having close contact with prairie dogs (large rodents) that had been purchased as pets. Tracing investigations had found a common distributor of exotic pets where prairie dogs and Gambian giant rats were housed together in Illinois. The Gambian rats had been shipped to the USA from Ghana. However, the shipment contained a large number of other small mammals that might have been the source of monkeypox. The CDC also said that the possibility of human-to-human transmission in some cases could not be excluded.

The CDC note that, in humans, the signs and symptoms of monkeypox are similar to those of the smallpox but usually milder. Unlike smallpox, monkeypox causes lymph nodes to swell and the human incubation period is about 12 days. Studies of human monkeypox in rural Central and West Africa - where, the CDC point out, people are medically underserved - have indicated case-fatality ratios of 1 to 10 per cent.

Clinical signs observed in animals during the outbreak include fever, tiredness, coughing, discharge from the eyes, swelling in the limbs and a bumpy or blister-like rash.

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*Dr Bert Stevenson inducting the new President  
Dr Robin Yarrow with the Presidential Chain  
of Office*

*Dr Robin Yarrow (left) being congratulated by  
Dr Stevenson*



*Dr Bert Stevenson (with Chain of Office)  
flanked by the new President-Elect  
Dr Robin Yarrow (left) and the Past Presidents  
Dr Bakary Touray and Dr Preyor (right)*

## Council Meeting of CVA

29<sup>th</sup> June 2003, Wellington, New Zealand

The CVA also held its Council Meeting with 33 out of 52 councillors attending the meeting and various issues pertaining to the region were discussed. A work plan was prepared to give opportunity to developing countries to train their veterinarians in other countries through the CVA Study Fund and also to submit projects which could alleviate poverty in their region by increasing the standards of the farmers especially women and also by uplifting the veterinary profession through continuing education.



*Dr Stevenson chairing the Council Meeting with Rohman (left) and Pryor (right)*

The Commonwealth Veterinary Association is indebted to the aid agencies whose financial help made it possible for the veterinarians from many developing countries especially the smaller island nations to come to the conference in Wellington and enrich themselves with various issues pertaining to the profession and also enlighten themselves with the latest technological developments around the world.



*Councillors at the meeting*

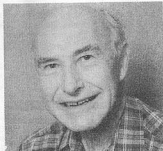
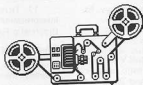
Some of the projects which were approved were the projects in Zambia to rehabilitate Women compromised with AIDS with providing them with poultry ,training of women dairy farmers in India ,Rabies control programme and stray dog control in developing countries such as Uganda and Island nations of the Pacific, Animal welfare issues and legislation. The projects were also so designed to achieve the objectives of the Commonwealth Foundation for member countries.



*Councillors at the meeting*



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## JOURNALS, BOOK AND AUDIO-VISUAL PROGRAMME

Contact: Dr. J.B. Derbyshire, Coordinator, CVA Book Programme, Department of Pathobiology, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada N1G 2W1.

E-mail: [jderbysh@uoguelph.ca](mailto:jderbysh@uoguelph.ca)

### CVA Book Programme

The CVA Book Programme is coordinated from the Ontario Veterinary College at the University of Guelph by Dr. Brian Derbyshire, assisted by Mr. Jim Brett, the College Librarian. A depot is also maintained in Australia by Dr. Jeff Cave, District Veterinary Officer, DNRE, 1 McKoy Street, Wodonga, Victoria 3689. Journals are not normally shipped, and few audiovisual aids have been donated. Books are available free of charge to graduate veterinarians in CVA member countries in good standing. Requests for books should indicate the required subject areas (see below) and/or preferred titles where possible, and they should include the mailing address to which the books should be sent. The latter should be abbreviated as much as possible in order that it may be accommodated in the limited space provided on the customs declaration. Priority is given to requests from institutional libraries, and requests from individuals are met as funds permit. Shipments are made by surface mail, and may take up to 8 months to reach their destination. In 2002, books were sent to Ghana, The Gambia, Fiji, India, Kenya and Uganda. Five shipments were to institutions, and seven were to individual veterinary clinics. The following is a summary of the books currently available by subject area, as well as the titles of some popular texts of which multiple copies are held. A copy of the complete inventory may be obtained on request.

#### Anatomy

37 titles, including *Evans & Delahunta*: Miller's Guide to Dissection of the Dog, *Evans & Christensen*: Miller's Anatomy of the Dog, *Habel*: Guide to Dissection of Domestic Ruminants, and *Sack & Habel*: Horse Dissection.

#### Anesthesia

12 titles, including *Soma*: Textbook of Veterinary Anesthesia, and *Hall*: Wright's Veterinary Anesthesia & Analgesia.

#### Animal Science

44 titles, including *Leahy & Barrow*: Restraint of Animals, and *MacDonald*: Pig Husbandry Technology for Warm Climates.

#### Avian, Fish, Laboratory Animal & Wildlife Medicine

31 titles, including *Julian*: Poultry Husbandry, and *Harkness & Wagner*: Biology & Medicine of Rabbits & Rodents.

#### Biochemistry & Biology

12 titles, including *Mitchell et al*: Zoology.

#### Equine Medicine & Surgery

12 titles, including *Adams*: Lameness in Horses.

#### Farm Animal Medicine & Surgery

16 titles, including *Radostits et al*: Veterinary Medicine.

#### Histology & Hematology

26 titles, including *Banks*: Applied Veterinary Histology, *Delman & Brown*: Textbook of Veterinary Histology, and *Schalm et al*: Veterinary Hematology.

#### Immunology

11 titles, including *Tizard*: Veterinary Immunology, and *Roitt et al*: Essential Immunology.

#### Microbiology

24 titles, including *Prescott & Baggot*: Antimicrobial Therapy in Veterinary Medicine, *Fenner*: Veterinary Virology, and *Hirsch & Zee*: Veterinary Microbiology.

#### Miscellaneous

18 titles, including *Kirk & Bistner*: Handbook of Veterinary Procedures and Emergency Treatment, Merck Veterinary Manual, and *Fenner*: Quick Reference to Veterinary Medicine.

**Parasitology**

19 titles, including *Georgi*: Parasitology for Veterinarians, and *Grieve*: Parasitic Infections.

**Pathology**

15 titles, including *Thompson*: General Veterinary Pathology, *Jubb et al*: Pathology of Domestic Animals, *Moulton*: Tumors in Domestic Animals, and *Slausen & Cooper*: Mechanisms of Disease.

**Pathology - Clinical**

9 titles, including *Duncan & Prasse*: Veterinary Laboratory Medicine, and *Sodikoff*: Laboratory Profiles of Small Animal Diseases.

**Pharmacology**

11 titles, including *Booth & McDonald*: Veterinary Pharmacology & Therapeutics.

**Physiology**

8 titles, including *Cunningham*: Textbook of Veterinary Physiology.

**Public Health, Zoonoses & Epidemiology**

7 titles, including *Schwabe et al*: Epidemiology in Veterinary Practice.

**Radiology**

11 titles, including *Owens*: Radiographic Interpretation for the Small Animal Clinician, and *Kealy*: Diagnostic Radiology of the Dog & Cat.

**Small Animal Medicine**

61 titles, including *Kirk et al*: Current Veterinary Therapy, *Povey*: Infectious Diseases of Cats, *Ettinger*: Veterinary Internal Medicine, *Muller et al*: Small Animal Dermatology, and *Lewis & Morris*: Small Animal Clinical Nutrition.

**Small Animal Surgery**

35 titles, including *Bojrab*: Current Techniques in Small Animal Surgery, *Emily & Penman*: Small Animal Dentistry, and *Magrane*: Canine Ophthalmology.

**Theriogenology**

36 titles, including *Carlson*: Patten's Foundations of Embryology, *Noden & De Lahunta*: Embryology of Domestic Animals, *Roberts*: Veterinary Obstetrics & Genital Diseases, and *Morrow*: Current Therapy in Theriogenology.

**Toxicology**

6 titles, including *Osweller et al*: Clinical & Diagnostic Veterinary Toxicology.

J.B. Derbyshire

Coordinator, CVA Book Programme

## SARS: A Viral Invader from Outer Space?

Sars may turn out to be an alien invader from outer space, some scientists believe.

Professor Chandra Wickramasinghe, from the University of Cardiff, says there is already evidence that the virus which causes Sars is extraterrestrial. He warned it could still be circulating high in the atmosphere, and might fall on Earth without warning.

Microbiologist Milton Wainwright of Sheffield University says the evidence that Sars came from space is the virus's unique character, the fact it was first detected in China, the low rates of infection except through close contact, and the failure to restrict the epidemic.

The idea is not as fanciful as it sounds. A small group of respected astrobiologists, led by Wickramasinghe, believe the idea of bugs and viruses arriving on Earth from space is perfectly plausible. They point to ancient and modern major epidemics which appear suddenly and spread in a way that cannot easily be explained. Examples include the plague of Athens and the devastating influenza pandemic of 1917-19 that killed more people than the First World War. Samples of air taken from 26 miles up in the stratosphere have yielded many microbes, but whether or not they are extraterrestrial is open to question.

Wickramasinghe's team estimate that a ton of bacterial material falls to Earth from space daily, equivalent to 20,000 bacterial per square metre of the Earth's surface.

The theory is that extraterrestrial micro organisms and viruses are carried around the solar system by comets or meteorites.

In a letter to the *Lancet* journal, Wickramasinghe and colleagues in Britain and India pointed out that Sars was unexpectedly novel and appeared suddenly in China.

"A small amount of the culprit virus introduced in the stratosphere could make a first tentative fall out east of the great mountain range of Himalayas, where the stratosphere is thinnest, followed by sporadic deposits in neighbouring areas", they wrote.

The viral fall out would be likely to continue seasonally over a few years. The scientists said all reasonable attempts to contain the spread of Sars should continue. But they added, "We should remain vigilant for the appearance of new foci (unconnected with infective contacts or with China) almost anywhere on the planet."

New cases might continue to appear until the stratospheric supply of the causative agent becomes "exhausted".

According to figures updated on day by the World Health Organisation, a total of 7,956 Sars cases have now been confirmed, causing 666 deaths.

Vijay Times, India, May 27, 2003

## CVA STUDY FUND

### The Fund

This fund has been established by the Commonwealth Veterinary Association (CVA) in conjunction with the Commonwealth Foundation to honour the contributions made by Mr. John Anderson and Dr. L.P.E. Choquette in establishing and promoting the activities of the Commonwealth Veterinary Association.

Financial support to match the funds contributed by the Commonwealth Veterinary Association and the several national and local veterinary associations throughout the Commonwealth may be provided by the Commonwealth Foundation.

### 1. Purpose

Its purpose is to provide financial assistance to:

1. Veterinarians who are members in good standing of their respective national associations to undertake short term study visits to schools, institutions or to undertake short term study courses in veterinary medicine, animal production or related areas in other Commonwealth countries.
2. Animal Health Assistants recommended by the appropriate CVA Council Member and Regional Representative, to undergo further short-term training at a school or institution in another Commonwealth country.

It is expected that such visits will promote professional and para-professional contacts and provide grantees with new knowledge and expertise in their respective fields of interest. Study proposals which will directly benefit the rural poor and disadvantaged will receive sympathetic consideration. All proposals will be expected to describe how they will benefit the home institution, veterinary organization and community. The visit is also expected to result in a broadening of cultural experience and horizons and to promote Commonwealth understanding.

### 2. Guidelines

1. Grants will be limited to persons with field experience and not holding senior positions.
2. The awards are not normally available for University academic or research staff.
3. Preference will be given to related regions with 'south-south' movements being encouraged. In exceptional cases, visits to institutions outside the regions qualifying under south-south arrangement will be considered as long as the cost of the visit does not exceed the allocated fund award (Aus \$ 3000). In exceptional circumstances and where approved by the President grantees may receive training in a non-Commonwealth country within that Region.
4. The study period should be preferably between 2-3 weeks.
5. Awards will normally be distributed equally amongst Regions, however, on occasion, the President may authorize additional awards to a particular Region in any one year.
6. The study visits will be financed at a maximum of Aus \$ 3000 including a prepaid air ticket for the least expensive and most direct route.
7. Grants are provided only for periods of concentrated study or training on a particular topic or activity and cannot be made for attendance at conferences,

meetings etc., nor to underwrite a tour of visits to a number of institutions.

8. A report must be submitted to the Secretary CVA within three months of the completion of the study visit. At the completion of the study visit, the participant must receive a letter of release, which should clearly indicate duration of stay, and satisfactory completion of course. The letter should also confirm that at the time of departure, the participants have not left any debts unsettled. This requirement must be conveyed by the Regional Representative or Programme Director to the host institution before arrival of participant.
9. It will be necessary for the host institution to agree to assist in arranging suitable accommodation etc. affordable by the applicant.
10. Grantees will be expected to give one or two lectures at the host institution or veterinary association on aspects of animal health and production activities in their home country. These lectures should emphasize how their studies in the host country will benefit the rural poor and disadvantaged as well as their impact upon the environment.
11. These lectures and the discussions of topics, both professional and social, with the staff of the host institution or veterinary association will serve to further the aims and objectives of the Commonwealth Veterinary Association.

### 3. Applications

- i) There is a set Study Application Form/Application. Forms are available from the CVA Secretary, or through the CVA Website.
- ii) Applications should be submitted to the appropriate Regional Representative for processing, at least 6 months prior to the proposal visit.
- iii) The applicants should provide the following:
  - a) A complete curriculum vitae to the Regional Representative
  - b) Two passport size photographs
  - c) A letter of acceptance from the person who will supervise the study program in the host country
  - d) Evidence that the study has the support of his/her home institution or national association

### 4. Administration

- i) The Study Application Form with supporting documents must be sent to the appropriate Regional Representative
- ii) The Regional Representative will review the application and make a recommendation to the Programme Director.
- iii) The Programme Director will make a recommendation to the CVA President, who will make the final decision.
- iv) The Programme Director will then inform the Regional Representative who will inform the candidate.

Last date of submission of request to Council Members / Reg. Rep. is 30<sup>th</sup> Oct. 2003. RRs to submit their recommendations before 30<sup>th</sup> Nov. 2003 to the Secretary, CVA.

## CVA Study Fund Report

The CVA Study Fund for the year 2002-03 was awarded to two veterinarians from Sri Lanka – Dr Kithsiri and Dr Premalal. Arrangements were made by CVA for their transportation of two men at Madras Veterinary College, Chennai, India. The following are their report.

– Editor

### Report by Dr J.M. Kithsiri

First of all I would like to thank CVA for providing me with the opportunity to undertake the study tour on Livestock Farm Practice Management from 16<sup>th</sup> April 2003 to 30<sup>th</sup> April 2003. The training programme was organised by the Madras Veterinary College, Chennai and it was coordinated by Dr S. Thilagar, Professor and Head of the Department of Clinics.

On my arrival at Chennai for the training I was introduced to the Dean and the staff members of Madras Veterinary College by Dr S. Abdul Rahman, the Secretary, Commonwealth Veterinary Association and Dr S. Thilagar, Training Coordinating Officer.

The two week training programme was scheduled into two-sessions daily including weekends. Each session consisted of four hours and three hours respectively.



*Large Animal Clinic*

During the training period in the Dept. of surgery, I had exposure to demonstrative surgery on selected routine operations such as castration and hysterectomy in canines. In addition to that I got specific knowledge on orthopaedic and ophthalmic surgery. I noticed that for fracture reduction and fixations modern techniques and equipments were used. In order to treat lens opacity, lens replanting was done. The technique of which I learnt for practising in my country. I got the opportunity to handle some referral clinical cases which required surgical intervention. As well as I underwent training following procedures such as pre-operative preparations and aseptic surgical principles, maintenance of inhalation anaesthetised patient, which was very useful to me.

Within the period in small animal out patient clinic, I got exposure to 50-60 cases daily and came to know



*Small Animal Out-patient Clinic*

many common disease condition in India and their diagnostic methods and treatment plan. At the same time, I got the idea about the common drugs used. This knowledge would be very useful to me in Sri Lanka.



*Goat Farm*

This training programme helped me to gather new knowledge and experiences regarding livestock as well as pet animals and it will definitely help me cater to a better service to my farmers in Sri Lanka.

I would like to convey my sincere thanks to Commonwealth Veterinary Association for granting me the CVA Study Fund and especially Dr S. Abdul Rahman for offering me this invaluable opportunity and experience.

## Training in Veterinary Clinical Medicine and Surgical Procedure

My colleague Dr Kithsiri and I arrived in Chennai on 15<sup>th</sup> April 2003 for the training programme. The following is my report.

### Objective of the Study

Upgrading clinical and surgical knowledge in small and large animals medicine.

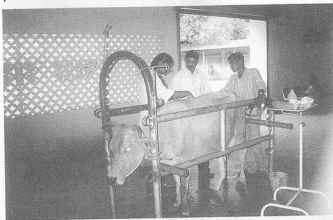
### Description of the Training

The training period was of two weeks in different Departments of Veterinary College and Central Veterinary Laboratory. The training consisted of Clinical medicine and Surgery, which made up of,

1. Small animal medicine
2. Small animal surgery
  - a. Orthopaedic surgery
  - b. Soft tissue surgery
  - c. Ophthalmology
3. Large animal medicine
4. Large animal surgery
5. Clinical laboratory

### Small Animal Medicine

This clinical training was carried out in the out patient and casualty unit of the College.



*Large Animal Clinic*

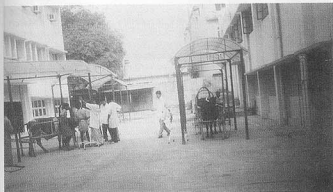
There were more small animal cases in the out patient unit especially dogs. So I was exposed to more than 50 cases per day. Among the common clinical conditions was Leptospirosis that was very interesting for me because that condition is not common in my country. I learnt the entire system of handling and treating these cases.

### Large Animal Medicine

I had also an opportunity to see many other behavioural and viral diseases. All the large animal clinical cases were studied at the out-patient unit of the college. People brought their sick animals to the clinics. This was different from the situation in my country where we have to visit the sick animals in the owners place to treat them.

### Small Animal Surgery

The surgical theatre was well equipped and surgeries were carried out in a hygienic manner. The most common surgery was orthopaedics surgery. I learnt bone plating technique and the use of various type of splints, I was more interested in general anaesthetics agents because that was different to my country practices. Here, frequently xylazine, ketamin combination was used. As this combination for general anaesthesia is more safe than sodium thiopentine which is very frequently



*Large Animal Clinic*



*Small Animal Out-patient department*

used in my country because of the low cost. The surgical techniques were all most similar to my country but dressing techniques were different. Urethrostomy was another interesting surgery which I benefitted from.

Majority of the clinical cases were similar to my country, but there were few new cases, I was not exposed to, these were carbohydrate engorgement and theleriasis.

Theileriasis was very interesting clinical case for me. Noted the clinical findings and treatments

In the large animal rotation, I got opportunities to study equine cases. The common clinical conditions bring equine colic. I was also exposed to few small ruminant clinical cases.

### Large Animal Surgery

The presented surgical conditions were wound dressing laserations. I learnt dressing procedure on wounds with drugs such as Providone iodine and Zinc oxide. These chemicals are not much used in my country for large animal surgeries.

### Clinical Laboratory Training

Clinical laboratory training was held in the University and I gained knowledge of antibiotic sensitivity test and did practicals also. The Central Laboratory of the University was also visited where I gained the knowledge of how to diagnose Leptospirosis by PCR technique.

### Training Grained

As a field veterinarian, the training programme was very useful for me to upgrade my clinical and surgical knowledge. As the diseases and conditions

were similar to my country the training was beneficial for my present carrier, wherein I will utilise the knowledge gained to the maximum.

### Acknowledgement

My acknowledgements to Commonwealth Veterinary Association for the financial support. Dr. Abdul Rahman, Secretary, CVA for arrangements of training and providing other necessities. SLVA for nominating me for the training. My special thanks to Dr. I.V.P Dharmavardana Secretary, SLVA, for continuous guidance. Further, my thanks to all teachers and head, clinical department of University of

Tamil Nadu. Finally, others those who assisted me in numerous ways.

Dr M.D. Najith Premalal  
Sri Lanka

## Veterinary Cricket World Cup 2003 start warming up for Jamaica 2007

The KwaZulu-Natal Branch of the South African Veterinary Association has hosted a National Veterinary Cricket Tournament for many years. Regional teams of vets from the "Mighty Midlands", Durban and Coastal, Johannesburg, Pretoria, and Onderstepoort and teams from industry and the State have participated in an event designed to foster camaraderie within the profession.

This year coinciding with the official Cricket World Cup in South Africa in February and March 2003, it was decided to expand the competition to include more teams from South Africa and to generate international veterinary fellowship by extending the invitation to other cricket-playing countries with which we have close ties.

Preparation for the event began in February 2002 and as the organisation gathered momentum, so the vision evolved that it should be regarded as the inaugural Veterinary World Cup Cricket Tournament. The knowledge gathered from this event would be used to create a bigger and better tournament in conjunction with the official World Cup in the West Indies in 4-years' time.

Vet News, April 2003

## Asia

### 12<sup>th</sup> Asian Regional Meeting of CVA & Second International Seminar On Animal Welfare 14<sup>th</sup> & 15<sup>th</sup> February 2003. Bangalore, India.

The 12<sup>th</sup> Asian Regional Meeting of CVA & 2<sup>nd</sup> International Seminar On Animal Welfare was held at Bangalore, India on 14<sup>th</sup> - 16<sup>th</sup> February 2003.

The theme of the seminar was "Animal Welfare and Veterinary Profession".

This seminar was jointly organised by the Commonwealth Veterinary Association and the World Society for the Protection of Animals, UK.

The seminar was inaugurated by Mr. Peter Davies, Director General, World Society for the Protection of Animals. Dr. B.C. Ramakrishna, President, Karuna Animal Welfare Association of Karnataka was the Chief Guest. Dr. T. Ashwathanarayana, Director, Dept. of Animal Husbandry and Veterinary Services, Government of Karnataka, presided over the function.



Inauguration of the Conference by Mr. Peter Davies, Director, WSPA by lighting the traditional lamp with Dr Rahman and the Chief Guest Dr B.C. Ramakrishna

The introduction to the seminar was given by John Callaghan of WSPA. The vote of thanks was proposed by Dr Kantharaj, Secretary of the Karnataka Veterinary Association.

The conference incorporated the 'Concepts in Animal Welfare' Veterinary Syllabus - a syllabus for the teaching of Animal Welfare in veterinary institutions - currently being developed by the World Society for the Protection of Animals in collaboration with the University of Bristol, UK. Subjects covered included:

Companion Animal Issues; Farm Animal Welfare including the impact of Global Trade; Animals in Teaching and Research; Animal Welfare Teaching in Veterinary Institutions; and Animal Welfare Legislation.



Welcome Address by Dr Rahman, John Callaghan, WSPA being presented with a bouquet



*Mr Peter Davies delivering the Inaugural address*



*Section of the audience*

CVA Council Members from Sri Lanka and Bangladesh and delegates from UK, New Zealand, Sri Lanka, USA and Belgium participated.

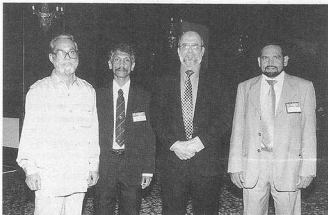
A total of 10 speakers namely Drs. John Callaghan (WSPA, UK), Chinnny Krishna (Animal Welfare Board of India, India), Dharmawardene (Secretary, SLVA), Jim Edwards (Past President, WVA, NZ), Deepashree Balaram (WSPA, UK), Nancy de Briyne (Director, Federation of Veterinarians of Europe, Belgium), Andrew Butterworth (University of Bristol, UK), Avi Deshmukh (Nestle-Purina, USA), Sultan Mohiuddin (CVA Council Member, Bangladesh) and Abdul Rahman (Secretary, CVA) presented papers on the above topics.

The papers presented were, Introduction - Concepts in Animal Welfare; Has the ABC Programme been a Success in India?; Animal Welfare Issues in Sri Lanka; Role of Veterinarians in Animal Welfare; Introduction to Animal Welfare Ethics; The Welfare of Farm Animals in Europe-Current Conditions & Measures; European Veterinarians and Animal Welfare; Broiler Chicken - The Impact of Global Trade on Poultry Welfare; Companion Animals: Population Control Programmes; Use of Dogs and Cats in Substantiating Nutritional Adequacy of Pet Foods Using Non-Invasive Methods; Alternatives to Animal Use in Veterinary Education; Animals in Experiments; Animals in Entertainment; Animal Welfare Issues in Bangladesh; and OIE and Animal Welfare.

### Asian Regional Meeting of CVA

The Asian Regional Meeting of CVA was held on 16th February 2003 at Hotel Atria. Dr A.A. Ramzee, Council Member Pakistan could not attend the

meeting due to his ill-health. Dr Sultan Mohiuddin, Bangladesh and Dr Shaktivale, Sri Lanka participated. Dr Dharmawardena, Secretary, SLVA attended the meeting as an Observer.



*L-R: Sultan Mohiuddin, Dharmawardena, Rahman and Shaktivale*

Dr Rahman explained the situation in India wherein the Indian Veterinary Association has been split into two organisations and the matter is in the court and until the court gives its verdict, the new councillor for India is yet to be appointed.

The meeting discussed various issues pertaining to the region and the implementation and use of CVA Study Fund by National Associations especially Bangladesh and proposal of projects for implementation in the region.



## Bangladesh

### Eighth Biennial Conference of Bangladesh Veterinary Association 2002

The Bangladesh Veterinary Association organised its Eighth Biennial Conference at the Engineers Institution Auditorium in Dhaka on 19<sup>th</sup> December 2002.

The conference had three sessions, i.e., Inaugural Session, Scientific and Business Session. Mr. Abdul Mannan Bhuiyan, Hon'ble Minister for Local Government and Rural Development and the Secretary General of the Ruling Party i.e., Bangladesh Nationalist Party was the Chief Guest for the inaugural session. Hon'ble Minister for Fisheries and Livestock and the Mayor of Dhaka City Corporation, Mr. Sadeque Hossain Khoka was the Special Guest. Mr. Muhammad Abdul Haque, Secretary, Ministry for Fisheries and Livestock was the other Guest of Honour. Mr. Nurul Islam, Director General of the Department of Livestock Services was also present as a Guest. Dr M. Shahidul Islam, President of BVA was the President of the session.



*Dr Syed Abdul Kader*

More than 1000 veterinarians and 50 other professionals were present at the inaugural session. The theme of the conference was "The New Dimensions of Veterinary Services in the Era of Globalisation". Dr Mohd. Sultan Mohiuddin, Convener of the conference gave the welcome address.

Dr Emran Hossain Khan, Secretary General of BVA, Mr. Nurul Islam, Director General, Mr. Muhammad Abdul Haque, Secretary, Ministry of Fisheries and Livestock, Hon'ble Minister for Fisheries and Livestock and the Mayor of Dhaka City Corporation, Mr Sadeque Hossain Khoka and Hon'ble Minister for Local Government and Rural Development, Mr. Abdul Mannan Bhuiyan, addressed the gathering.

Dr. M. Shahidul Islam, in his presidential address thanked the Ministers, Secretary and other guests for attending the inaugural session of the conference in spite of their busy schedule. He thanked all the veterinarians coming from different places after taking much trouble.



*R-L: Dr Mohiuddin with Mr. Abdul Mannan Bhuiyan and Mr. Sadeque Hossain Khoka*

The second session of the conference was the seminar session. It was chaired by Dr. M. Mahbubur Rahman Col. (Retd.) Principal of the Sylhet Govt. Veterinary College. The paper on the theme of the conference "New Dimensions of Veterinary Services in the Era of Globalisation" was presented by Prof. Dr Hafezur Rahman and Dr Abdul Kalam. Dr Nitish Debnath, Principal of Chittagong Veterinary College, Prof. Dr Rafiqul Islam of BAU and Dr Shahid Motahar Hossain, Secretary-General, Bangladesh Livestock Association was also presented papers. Recommendations were made to be sent to appropriate authorities.



*Dr Md. Emran Hossain Khan*

The third session was the business session which was presided over by Dr M. Shahidul Islam, President of Bangladesh Veterinary Association. Different matters regarding the activities of the BVA were discussed in the session. BVA budget and the CEC election were also the matters of discussion. The whole day conference ended with a colourful cultural function and dinner.

**Dr. Mohd. Sultan Mohiuddin**  
CVA Councillor, Bangladesh

## First Graduation Ceremony of Chittagong Veterinary College

The first graduation ceremony of the Chittagong Government Veterinary College was held on 25<sup>th</sup> February 2003.

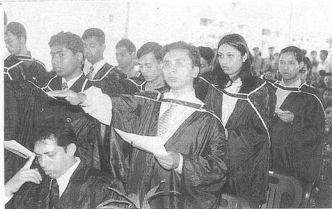
The foundation stone of the college was laid in 1995 and the classes were started in 1997. The first 50-students obtained their degree from the University. CVA is one of the organization which has been collaborating with the college by supporting a training project of training the surgical staff.



*Vice-Chancellor presenting the Crest of Honour to the Chief Guest*



*Dignitaries on the dias*



*Graduates taking the Veterinarian's Oath*

## Office-bearers of BVA

The election of the Central Executive Committee of the Bangladesh Veterinary Association was held on 20<sup>th</sup> December 2002 for the year 2003 and 2004. The following office-bearers were elected.

President	Dr Syed Abdul Kader
Sr. Vice President	Dr Santi Rajan Das
Vice Presidents	Dr Mohammad Shamsuddin Dr A.K.M. Golam Qadir
Secretary-General	Dr Md. Imran Hossain Khan
Joint Secretaries	Dr Md. Atiqur Rahman Dr Md. Abdur Rahim
Treasurer	Dr Abdur Rashid
Organising Secretary	Dr Md. Nazrul Islam (Jhantu)
Press & Publication Secretary	Dr Md. Tareque Hossain
Cultural Secretary	Dr. Munshi Enamul Haque
Social-Welfare Secretary	Dr Md. Atowar Rahman
Members	Dr. Mohd. Sultan Mohiuddin Dr. Sajeda Akhter Dr Maksudul Hasan Hawladar Dr Liakat Ali Dr Wajir Ahmad Dr Md. Nurul Alam Dr Md. Riazul Haque Jashim
Ex-Officio	Dr M. Shahidul Islam Exe. Editor Bangladesh Veterinary Journal
CVA Councillor	Dr. Mohd. Sultan Mohiuddin  Dr. Mohd. Sultan Mohiuddin CVA Councillor, Bangladesh

"Semen is a very potent and strong brew of lots of chemicals which, because of their biological reactivity, could be carcinogenic if left to lie around". Professor Graham Giles, of Australia's Cancer Council Victoria, explaining his study's finding that frequent masturbation in the 20s, 30s and 40s may protect men against prostate cancer.

Newsweek, July 28, 2003

## Pakistan

### Pakistan Eradicates Rinderpest

The United Nation's Food and Agriculture Organisation (FAO) has announced that Pakistan has declared itself "provisionally free" from rinderpest. The whole of Asia is now believed to be free from the disease.

For a country to declare itself provisionally free from rinderpest, it must prove that there has been no outbreak for at least two years, that it has stopped vaccination and that a surveillance system is in place, according to the rules overseen by the World Organisation for Animal Health (OIE).

The last cases of rinderpest, a highly infectious viral disease that can destroy entire population of cattle and buffaloes, were detected in October 2000 in a buffalo farm near Karachi, FAO said.

Peter Roeder, Secretary of the FAO-led Global Rinderpest Eradication Programme (GREP), said that with Pakistan's success, there is growing confidence that the whole Asia is now free from rinderpest. "Pakistan's success story brings GREP a large step nearer to the goal of rinderpest eradication by 2010. The challenge for GREP in Asia is now to help all countries to stay free from rinderpest and to be prepared for emergencies. They also need to closely monitor the situation to finally prove that they are completely free from the disease", he added.

Roeder said that now rinderpest has gone, Pakistan will be able to export more livestock. This will contribute to increased income and food security in rural areas and will help to reduce poverty. Pakistan earns about 12 per cent of its foreign exchange from livestock trade.

Efforts are underway to eradicate the last traces of rinderpest in northeast Kenya and southern Somalia in order to meet a global deadline of 2010 for declaring the world completely free from the disease. It would be only the second disease eradicated in history, after smallpox.

## India

## Sri Lanka

### Centenary Celebration of Madras Veterinary College

Madras Veterinary College, the forerunner for starting a degree course in Veterinary Science in Asia celebrated one hundred years of its establishment with series of programmes during the year culminating in a grand function on 6<sup>th</sup> July 2003 with the Vice President of India Mr. Shakawath, declaring opening the Museum and releasing the Souvenir. Mr. Ram Mohan Rao, Governor of the Tamil Nadu unveiled the Centenary Pillar, and the Chief Minister of Tamil Nadu Ms. Jayalalitha laid the Foundation Stone of the Centenary Building. Dr Kadirvel, Vice Chancellor welcomed the guests.



L-R: Mr. Ram Mohan Rao, Mr. Shakawath, Ms. Jayalalitha and Dr Kadirvel (in suit).

Ever since its establishment in 1903, the college has been the most highly advanced technical institution in the country offering both undergraduate and postgraduate courses and was the first in the country to have its own Veterinary University.

### New Regional Representative of Asian Region

Dr (Mrs.) H.M.S.P. Herath, CVA Council Member, Sri Lanka and President of Sri Lanka Veterinary Association has been elected as the new Regional Representative of Asian Region with effect from 1.1.2003.

Mrs. herath graduated from Peradeniya in 1975 and obtained her MSc from the same institute in 1982 and obtained her FRVC in 1987 from Sweden. She has had higher training in animal reproduction from Finland, India and Malaysia.

She has worked in various capacities starting as a veterinary assistant surgeon and is currently the Director (Animal Breeding), Dept. of Animal Production and Health at Peradeniya, Sri Lanka.

### Office-bearers of SLVA

The list of the Office Bearers is as follows

President	Dr (Mrs.) H.M.S.P. Herath
President Elect	Dr. H.P. Premasiri
Vice President	Dr. A.R. Mohomad
Vice President	Dr. R.P.V.J. Rajapaksha
Secretary	Dr. T.P. Wijethilaka
Treasurer	Dr (Mrs.) K.A.C.H. Kothalawala

#### Committee Members

Dr. (Miss) N.W.K.P. Wijewantha  
 Dr. S.D. Eleperuma  
 Dr. (Mrs.) S.L. Jayasinghe  
 Dr. M. Somarathna  
 Dr. S. Mallawarachchi  
 Dr. Virap Abeyasinghe

Ex officio	Dr. A. Shakthivel Dr. I.V.P. Dharmawardena Dr. A. Sivasothy
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CVA Councillor Dr. H.M.S.P. Herath



Dr (Mrs) Herath

She has served the Veterinary profession being elected member of the Veterinary Council of Sri Lanka for several years and was the first lady President of VCSSL in 1993. She was also a member of the Editorial Board of the Sri Lanka Veterinary Journal from 1990 to 1998 and a member of the Executive Committee of the Alumni Association of University of Peradeniya.

She is also a member of a Special Committee of Art Gallery and Museum Project of the Alumni Association.

## Australasia/Oceania

### Singapore

#### Annual Meeting of SVA

The Singapore Veterinary Association held its Annual Meeting and Get-together on 26<sup>th</sup>-27<sup>th</sup> October 2002, at the Marriot Hotel. The new office bearers for 2002/2003 are -

President:	Dr NG Fook Kheong
Vice-President:	Dr Shane RYAN
Hon. Secretary:	Dr Simon QUEK
Hon. Treasurer:	Dr Daphne ANG

Apart from the President, the 3 office holders are Murdoch (Australia) graduates/connections.

During the year a Continuing Professional Education (CPE) Workshop on Veterinary Anaesthesia was held. This attracted more than 30 practicing veterinarians and was a great success.

The Association has been looking into Continuing Professional Education (CPE) for a while. The issue of CPE will be taken to the next level in 2003, with the impetus shared with other professions in Singapore, such as the Medical and Architect professions.

Licensing of veterinary clinics and hospitals - SVA met and discussed with the authority on the drafting of the conditions of licensing of veterinary clinics and hospitals. All clinics and hospitals will have to comply with the minimum conditions of licensing by 1<sup>st</sup> January 2003.

Year 2002 has been reported a significant year for the profession. For the first time, the number of private practitioners exceeded the number of vets employed in the public sector. This reflects the change in the profile of the profession from one devoted to agriculture in the 60' and 70's to that of pets today.

One of us, Dr Lennie Lee, has written a book, co-authored with Ilsa Sharp. It is entitled 'Singapore Dog - K9 Facts, Figures & Fancies'. It has voluminous

information to help with anyone planning to rear a dog in Singapore. It should prove useful to others living in the tropics in other parts of the world, sorting out old-wives tales of what to do and not-do to your dog."

I am glad to inform you that I was re-elected to the Animals Committee of CITES at its biennial meeting in Santiago, Chile 3<sup>rd</sup>-15<sup>th</sup> Nov, 2002. The Convention on International Trade in Endangered Species of Wild Fauna and Flora is a UN convention to protect endangered wildlife. I was elected as a Regional Representative (Alt) for Asia.

Giam Choo Hoo  
CVA Councillor, Singapore

### Australia

#### AVA's New Chief Executive

Margaret Conley has been appointed as the new Chief Executive of Australian Veterinary Association. She has earlier worked in radiography, small business, association management and public health policy roles.



Dr Margaret Conley

Aust Vet. J., Vol 81,  
Jan/Feb 2003

### Solomon Islands

#### New Councillor of Solomon Islands

Dr Baddley Anita has been appointed as the new Council Member of Solomon Islands. Dr Anita has been associated earlier also with the CVA.



Dr Baddley Anita

## Era Passes with Death of Will Chamberlin

Dr Will Chamberlin, the AVA's oldest member, passed away peacefully on Sunday 19<sup>th</sup> January. He was 102 years old.

Born on 22 October 1900 in Malvern, Victoria, Dr Chamberlin earned his BVSc degree at Melbourne University in the late 1920's, and an MVSc degree in 1931. After working at the Veterinary Research Station, Glenfield, under Dr HR Seddon, he moved to Launceston in 1933 as Veterinary Pathologist and CSIR Research Officer, before commencing private practice in Launceston in 1937. returning in his early 60's to Victoria, he subsequently practised until the age of 80.

A life member of the AVA, Dr Chamberlin was involved with the AVA since the 1920s, holding office in three states and being instrumental in the resurrection of the Tasmanian Division in 1933. He was also involved in the early stages of successful programs to eradicate two diseases of public health significance - brucellosis and hydatids.

Aust Vet. J., Vol 81, Jan/Feb 2003

## AVA Conference, Cairns, Australia

Presidents from various countries attended the AVA Conference in Cairns.



Outgoing President Dr Jo Toia (left) with the new President Dr Jo Sillince



L-R: Dr Jeanne Lofstedt (Canada), Prof Bani Penzhorn (South Africa), Dr Jo Toia (Australia), Dr Lewis Griffiths (NZ), Dr Joe Howell (US), and Dr Peter Jimman (UK)

## Canada Caribbean

### New Dean of Western College of Veterinary Medicine Announced

The University of Saskatchewan Board of Governors has approved the appointment of Dr Charles Rhodes as Dean, Western College of Veterinary Medicine (WCVM) for a 5-year renewable term.

Dr Rhodes, a Professor of Large Animal Clinical Sciences at the University of Saskatchewan, holds BSc and DVM degrees from the University of Minnesota and an MSc degree from Iowa State University. He has served on faculty at the WCVM for over 30 years.



Dr Charles Rhodes

Can Vet J Vol. 44, April 2003

### New President of CFIA

Dr Richard B Fadden was appointed President of the Canadian Food Inspection Agency on 23<sup>rd</sup> September 2002.

Mr Fadden joined the public service in 1978 and has held a variety of positions of increasing responsibility since that time, including Assistant Auditor General, Audit Operations, Office of the Auditor General of Canada; Assistant Deputy Minister, Corporate Services, Natural Resources Canada; and Assistant Secretary, Government Operations Sector and Infrastructure Works, Treasury Board Secretariat.



Dr Richard B Fadden

Can Vet J., Vol 44, April 2003

# East, Central and Southern Africa

## Report of the Council Meeting of the Commonwealth Veterinary Association for the ECS Africa Region

The Council Meeting was held at Square Affairs Room, Convention Centre, Wellington, New Zealand on 29<sup>th</sup> June 2003 at 1400 hrs.

### Attendance

Dr W.O. Ogara	Regional Representative, Chairman
Dr V.B. Goodoyal	CVA Councillor, Mauritius, Secretary
Dr P. Chikungwa	CVA Councillor, Malawi
Dr G. Bath	CVA Councillor, S. Africa
Dr S.G. Okech	CVA Councillor, Uganda

### In Attendance

Dr M.R. Jaumally	Ex-Regional Representative, Mauritius
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### Apologies

Dr Mirnyoi	CVA Councillor, Tanzania
Dr Lerotholi	CVA Councillor, Lesotho

(The Councillors whose apologies are recorded were not able to attend because of visa problems, Dr G. Gwaze, CVA Councillor, Zimbabwe had expressed his desire to attend but it was not possible as Zimbabwe is not financial and its membership is temporarily suspended).

### Agenda

1. Introduction
2. Regional Representative's Report
3. Future Pan CVA Meetings
4. Inactive Member Countries
5. Preparation for the next Regional Meeting
6. CVA Study Fund
7. Regional Projects
8. A.O.B

### Introduction

The Regional Representative, Dr. W.O. Ogara welcomed the council members to the meeting. He noted that the meeting was a mini one because councillors from Zimbabwe, Lesotho, Botswana, Namibia and Mozambique were not present. He welcomed Dr. G. Okech, the new CVA Councillor from Uganda and Dr M.R. Jaumally, the immediate past Regional Representative, in the discussions.

It was also noted that changes of councillors have taken place among Namibia, Zambia, Uganda, and Kenya countries.

### Report from Regional Representative

Dr Ogara congratulated Prof G. Bath and Ann Pryor for the tremendous contributions they had made towards visa formalities of the councillors from the African continent.

Dr Ogara requested the councillors to update their address including emails. At the moment, it remains difficult to communicate consistently with a number of councillors.

### Future Pan Commonwealth and Regional Meetings

Prof G. Bath reported that some councillors encountered several problems in arranging for their travel to this conference. These include primarily visa requirements and travel arrangements. He recommended that the requirements of the host country should be made available and a time frame set to facilitate participation. He further reported that some councillors did not attend this conference while they have been with us in the past. This matter to be pursued to verify the circumstances involved.

### Inactive Member Countries

Dr Jaumally recommended that the Regional Representative visit the National Veterinary Associations of Mozambique, Botswana and Lesotho in order to create contact and seek for the nomination of representatives.

### Preparation for the next Regional Meeting

It was decided to write to Zambia to prepare a complete budget proposal for the regional conference which will be held in the country. It was decided that the RR writes to the councillor in Zambia and request for these details. If no response was forthcoming in two weeks, then the conference would be shifted to Uganda. The response from Zambia should clearly indicate the theme, venue accommodation, transport and other logistic support and the total cost of holding the conference.

**CVA Study Fund**

There has been no new applications received from the region. The RR requested the councillors to submit applications for the Study Fund not later than mid September 2003. The important requirement is that the applicant must identify a host institution before submitting the proposal.

**Regional Projects****Projects already approved**

The National Rabies Project in Uganda was approved at the Executive meeting in Cyprus. It was however decided that Uganda scales down the project cost to A\$5000 and at the same time handle the project at a specific regional level instead of countrywide. Dr Okech was asked to streamline the implementation of the project and inform the RR accordingly. He was also requested to submit a copy of the project to RR.

**FAMACHA Project**

Prof. Bath had a busy work schedule and could not implement the project earlier. He informed the meeting that he is now ready to implement the project.

**Goat Project in Zambia**

This project too was also discussed and approved at the Cyprus Meeting and needed to be followed.

**New Projects**

Various projects were submitted at the meeting by Malawi, South Africa, Kenya and Mauritius. Councillors for Mauritius submitted two projects which can be considered for use in other countries of the regions.

1. Poultry & Eggs - An Alternative to Self Sufficiency
2. Integrated Farming System

The RR suggested that these proposals be evaluated before submission to the CVA Program Director.

**Dr WO Ogara**  
RR, ECS Africa



## Uganda

### New CVA Council Member Uganda

The Uganda Veterinary Association (UVA) Executive has appointed Dr Samuel George Okech, as the new CVA Councillor effective for 2002/2003. Dr Okech can be contacted at the following address.

Dr Samuel George Okech  
c/- Uganda Veterinary Association  
PO Box 16540, Kampala, UGANDA  
Tel: (256 41) 251762 (UVA)  
(256 77) 605586 (Res)  
E-mail:uva@utloninbe.co.ug



## West Africa



### Ghana

### Ghana Veterinary Medical Association Executive Committee

The 28th Annual General Meeting and 14th Congress of the Association was held in Accra, Ghana, from 5th - 9th November, 2002, the following members were elected to the Executive for the period, 2002-2004.

President	Dr E.N Barnor
Immediate Past President	Dr Andy Quarcoopome
Vice President	Dr Phyllis G Addo
Secretary	Dr Richard D. Suu-ire
Assistant Secretary	Dr Hilary P. Lopez
Treasurer	Dr Sherry Eleblu
CVA Councillor	Dr Richard D Suu-ire

### New RR for West Africa

Dr Richard Dery Suu-ire, CVA Councillor Ghana nominated as the new Regional Representative of West African Region at the West African Regional Meeting held during the 3rd Pan Commonwealth Veterinary Conference at Wellington, New Zealand from 27<sup>th</sup> - 30<sup>th</sup> June 2003.



*Dr Richard D. Suu-ire*

Suu-ire graduated with Veterinary Medicine from Kishenev State Agricultural University, USSR in 1992 and Postgraduate Diploma in Endangered Species Management, University of Kent (UK) in 2000 and worked in Veterinary Services Department as Veterinary Officer at Sunyani District. He is now the Veterinary Officer-in-Charge of the Accra National Zoo and Kumasi Zoo, Ghana and Manager of Accra Zoological Gardens, and Unit Head, Pan Africa Project for the Control of Epizootics (PACE-Wildlife).

He is a member of various national and international societies.



## U.K. Mediterranean

### Handling Large Animal Emergencies

London fire-fighters may feel more about handling large animal emergencies in future, as the result of a joint initiative between the London Fire Brigade and the Royal Veterinary College. Over the past 18 months, over 200 fire-fighters have attended more than 20 small group-training sessions at the college on animal handling, lifting procedures and other useful skills. Staff and students at the college also benefited from the collaboration, by participating in the courses and learning how to work with an emergency team.

One result of the initiative is that improved rescue equipment and special mobilising procedures, aimed at rescuing large animals while minimising stress to the animals and to the fire-fighters handling them, are now available at four London fire stations - Erith, Dagenham, Wandsworth and Wembley.

Three college staff-members - Vivienne Heys, Charlotte Verity and Anne Chivers - oversee the training sessions, which were run by between five and seven undergraduates. The training was coordinated by Bob Hill, Group Commander Operational Planning for the London Fire Brigade.

The training has already been put to the test. A heavy horse was rescued from a pond after it escaped and became lodged in mud, and collapsed horses have been lifted in two stable yards.

The Veterinary Record, Vol. 152, No. 26

### Do Fish Feel Pain?

A recent paper by scientists from the Roslin Institute and the University of Edinburgh discussing whether fish feel pain has been welcomed by the Fish Veterinary Society (FVS).

The paper, widely reported in the national press, described studies on rainbow trout to determine whether they have nociceptors, that is, nervous receptors which respond preferentially to tissue-damaging stimuli. Over 20 nociceptors were found on the face and head region of the trout. In experiments, the team further demonstrated that the trout responded to noxious stimuli, which were introduced by injecting their lips with bee venom or acetic acid.

The Veterinary Record, Vol.152, No.20

## Abstracts

### Efficacy of magnets for the treatment of traumatic reticuloperitonitis in cows

A magnet was administered to each of 90 cows which had been shown radiographically to have a metallic foreign body in the reticulum. The magnet was detected in the reticulum of 75 of them and in the cranial aspect of the dorsal sac of the rumen of nine, but could not be detected in the other six. In 49 of the cows the foreign body was fully attached to the magnet, in six it was in contact with the magnet but still penetrated the reticulum, in 24 it was not clear whether it was attached. The foreign bodies which were most likely to be attracted to the magnet were those lying horizontally on the ventral aspect of the reticulum and those which did not penetrate the wall of the reticulum.

GANDINI, G., CIZINAUSKAS, S., LANG, J., FATZER, R. AND JAGGY, A. (2003). Radiographic findings before and after oral administration of a magnet in cows with traumatic reticuloperitonitis. *American Journal of Veterinary Research*, 64: 115-120.

### Detection of *Malassezia pachydermatis* on the skin of dogs

Samples were taken with either a strip of adhesive tape or a dry swab from the skin of 104 dogs with chronic dermatitis, and two techniques were used to assess these methods of sampling for *Malassezia pachydermatis* - a culture method and a staining method. With the adhesive tape, *M. pachydermatis* was detected on 83 of the dogs by the culture method and on 45 of them by the staining method; with the dry swab the organism was detected on 55 of the dogs by culture and on 33 by staining. The combination of the adhesive tape and culture was significantly better than the other three techniques, and the adhesive tape had the additional advantage that it could be used to transfer cells to a slide for staining before being used for culturing *M. pachydermatis*.

OMODO-ELUK, A.J., BAKER, K.P. AND FULLER, H. (2003). Comparison of two sampling techniques for the detection of *Malassezia pachydermatis* on the skin of dogs with chronic dermatitis. *Veterinary Journal*, 165: 119-124.

## General Articles

### Common Problems with Feeding Home-Prepared Foods to Dogs and Cats

Dr Linda Fleeman

*Nestlé Purina PetCare Lecturer in Small Animal Nutrition  
School of Veterinary Science  
The University of Queensland  
Australia*

*"Tell me what you eat and I will tell you what you are."*

*'The physiology of taste, or meditations on transcendental gastronomy' (Anthelme Brillat-Savarin)*

Food for pet dogs and cats is often prepared in the home. Ingredients include meat, fish, eggs, milk, other foods suitable for the human table, bones, and offal. Home-prepared food might be either raw or cooked when fed. The meals may be carefully formulated to provide a high-quality diet for dogs or cats, or may comprise 'left-overs' of the owner's meals. In some cases, home-prepared food provides 100% of the animal's diet, while in others it supplements a commercial diet.

One of the most common problems with feeding home-prepared food to dogs and cats is that the diet provided is not complete and balanced. The result is that animals fed these foods are at risk of nutrient deficiencies or excesses. This is a particular concern for growing puppies and kittens. Typical home-prepared meals for pet dogs and cats contain excessive protein, but are deficient in calories, calcium, vitamins and minerals. They often contain excessive quantities of meat, which has low calcium and high phosphorus and protein content.

It is especially difficult to provide an adequate balance of vitamins and minerals in home-prepared dog and cat diets because there are no complete and balanced veterinary vitamin-mineral supplements. Some human vitamin-mineral supplements are suitable but must not be cooked, heated, or stored with the food as this may cause destruction of the vitamins. In addition, home-

prepared diets will usually also require a specific calcium supplement, such as calcium carbonate. Health problems that may result when diets with poor mineral and vitamin balance are fed include secondary nutritional hyperparathyroidism (dietary calcium deficiency), dermatoses (dietary zinc deficiency), anaemia (dietary iron deficiency), developmental orthopaedic conditions (excess dietary calcium), hypercalcaemia (excess dietary vitamin D), and interference with bioavailability of other minerals (excess dietary zinc). The lens and the retina are particularly sensitive to nutritional problems and eye lesions may be seen in dogs and cats fed inadequate diets.

Even when owners take great care to research and formulate a complete and balanced home-prepared diet, there is a tendency for their recipe to slowly change



*One of the most common problems with feeding home-prepared food to dogs and cats is that the diet provided is not complete and balanced. This is a particular concern for growing puppies and kittens*

over time, resulting in a gradual decline of the nutritional value of the pet's diet. Owners often decide to make ingredient substitutions, or they may omit ingredients because of personal preferences or convenience. A common error made by owners who prepare food for their pets is to eliminate the vitamin-mineral supplement because of its inconvenience, expense, or a failure to understand its importance.

Bacterial contamination is a common problem when food is fed raw or incompletely cooked. This not only presents a health risk for dogs and cats, but also for the people who formulate and mix the raw food. Exposure to bacteria and other potential pathogens can occur from handling raw meat or from cross-contamination of dishes and utensils used to prepare the food. It is strongly recommended that only cooked food be fed to dogs and cats.

Several problems are associated with feeding bones to dogs and cats. Although the actual incidence of these problems is unknown, oesophageal and intestinal obstruction, colonic impaction, gastrointestinal perforation,

gastroenteritis, and fractured teeth have all been reported.

If home-prepared food is to comprise 100% of a dog or cats diet for an extended period of time, owners require knowledge, motivation, additional financial resources and careful, consistent attention to recipe detail to ensure a consistent, balanced intake of nutrients. Feeding commercially-prepared pet food offers several advantages over feeding home-prepared foods, including convenience, cost, and consistency. Good quality commercial foods are easier to use, less expensive, and provide better nutritional balance.

#### Suggested Reading

1. Freeman, L.M. and Michel, K.E. (2001). *Evaluation of raw food diets for dogs*. J Am Vet Med Assoc, 218(5): 705-709.
2. Remillard, R.L., et al. (2000). *Making pet foods at home*. In Small Animal Clinical Nutrition, 4th edition, Eds: Hand, M.S. et al. Mark Morris Institute, Topeka, Kansas, USA. p.163-181.

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## Animal Protection Society in Samoa

Dr Luana Ferrara  
 Veterinarian  
 Animal Protection Society  
 PO Box 3701  
 Apia, Samoa

Samoa - 'Penina ole Pasefika' - Pearl of the Pacific ..... Samoa (formerly Western Samoa), a small group of islands in the heart of Polynesia, is truly a pearl, a small paradise. But paradise is not always perfect. The 2 large and 5 smaller islands are home to some 200,000 Samoans and about 2 million dogs (well, it seems that way), most of which live on the main island of Upolu. Much of Apia (the capital), surrounding areas and villages are still built as they have been for hundreds of years. There are few set out streets; many are dirt roads leading to even more dirt tracks, no street names, no house numbers and few fences. It is very open and one area will have many members of the same

family living communally but in separate houses. Most people still live in a fale - open-sided Samoan houses with thatched or corrugated iron roofs. And they all have dogs which are kept as guard dogs, rarely as pets. Most homes have between 5-10 dogs and they are often big, aggressive and usually unapproachable. There are many dogs wandering the streets of Samoa, both strays and owned and this means a lot of 'socialising'.

The Animal Protection Society is a non-government organisation started in 1994 by a remarkable English/New Zealand woman

called Joan Welch as a response to the sad state of the many dogs and cats. With the help of supportive locals and expats, Joan and the APS Committee have steered the society into an irreplaceable organisation. The APS has always used the services of volunteer veterinarians funded by various aid



*Australian volunteer veterinarian Luana Ferrava performing a cat spay in an open fale (Samoa house) while veterinary assistant, Sione prepares a dog for surgery for fellow volunteer veterinarian Bronwyn (Walker on the left)*

organisations from Australia, New Zealand, Japan and Canada. There are currently two Japanese and one Australian working on 2 year assignments. There is also one local government veterinarian who deals mainly with the larger domestic animals - cattle, pigs, horses and chickens. Any vets interested in volunteering can write to the APS at PO Box 3701, Apia, Samoa.

The APS offers a totally mobile service. Though we have just opened a small two-room clinic and have had a few clients, this will take some time to become the norm as many people do not have transport and many dogs are unmanageable. We all have cars equipped with portable tables, surgical kits, drugs etc and all procedures are carried out at the client's house. It means a lot of driving and getting lost and it takes a bit of getting used to - but it works well. The society's main aims are animal birth control and education. So we do lots of neutering as well as regular vet work - car accidents, dog fights, sick animals etc..... Not all Samoan dogs are aggressive and they do respond really well to a bit of care and attention. Their owners certainly appreciate our services. The APS charges a nominal fee to cover costs

but we have been given coconuts, bananas, mats, vegetables, tinned fish, cloth as a donation if that is still not affordable. Most of our income comes from a very hard working fund raising committee and local donations.

We have no X-ray machine - the National Hospital radiographs for us at the end of their day if required. We have no anaesthetic machine - all our anaesthesia is intravenous. We have a very old monocular microscope which does work! Orthopaedics are difficult - almost every Samoan dog has been in a car accident and has a permanent limp somewhere. But, they are pretty hardy and manage very well - we do plaster and can pin limbs if we need to.



*Veterinary assistant Ava, clipping and preparing a dog for castration in an open air clinic in the village of Saleilua, Samoa. Members of the village and other dog owners wait and assist if necessary*

Samoa is a visually stunning place, totally and constantly green, the flowers are beautiful and the colours so rich. Samoans are incredibly friendly, they love to talk, to sing, to dance and they are a very giving and sharing society. Even though we are very busy, the pace here is much slower and much more relaxed than most western cities ..... it is also very, very hot.

In 2002 APS vets neutered over 500 dogs and cats, about 3000 since it began, it has prevented the birth of tens of thousands more and has improved the conditions and care of many living ones. The effects may not be obvious now, but certainly will be in 10 - 15 years. Quite an achievement for a bunch of volunteers!

## Meeting Community Expectations For Animal-Based Science – An Australian Perspective\*

Dr. Michael D. Rickard

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### Abstract

Members of the community have frequently expressed concerns about the use of animals in scientific experiments during the past three decades through the media, in formal surveys of public opinion and sometimes in acts of vandalism and violence against scientists and their institutions. Fortunately, to date Australia has not had to deal with the latter forms of protest against animal experimentation up to now. The debate in the 1980's was strongly polarized in Australia which provided a strong stimulus for governments, scientists and their institutions to implement measures to provide transparency and accountability for animal use to the public so that important research using animals was not jeopardised. It is acknowledged that the use of animals for research in contemporary society must be regarded as a privilege and not a right, so that when animals are used, all costs to the welfare of animals used in experiments must be carefully weighed against the potential benefits of the research outcomes in a process involving community input. This paper describes the system of self-regulation backed by legislation that has evolved in Australia, the components of which include legislation, a code of practice enforceable by law and institutional animal ethics committees. Community attitudes and expectations toward animal-based science and scientists are described and the role of the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) in promoting rational and open debate between scientists and opponents of animal experimentation is outlined. Some comparisons are made with the UK and New Zealand systems of regulation and consideration given to the future and the need to develop a 'culture of care' amongst scientists.

### Introduction

\*Those scientists who work with humans have certain standards that must be applied to what they do. Among the professional responsibilities in this field are the need to avoid doing too much damage to individuals and groups, and also the need to gain

informed consent before starting procedures that carry moral or physical risks. In the field of human research, however, there is a particular check against the erosion of good professional standards. This is that, at least in the world's democracies, and where research is carried out on consenting adults, the subjects of that research can themselves complain if it turns out that they believe themselves damaged in any way by the research. Animal research, by contrast, involves subjects to whom scientists have duties of care, but subjects who cannot complain about damage, let alone engage in litigation to seek compensation or restitution. So, while there is a direct check on the professionalism of those working with human subjects, this is lacking in the case of those working with animals. The maintenance of professional standards is thus more of a challenge in the latter area\* (Brennan, 2000).

The Australian Commonwealth Scientific and Industrial Research Organisation's (CSIRO) Animal Welfare Policy states at its outset that "CSIRO carries out research to improve the health, welfare and productivity of farm animals, to understand and protect Australia's unique environment and wildlife, to control vertebrate pests and to benefit human health. These objectives sometimes require the use of animals in research." Whilst there are those in the community who would disagree with the use of animals for research at all, scientists in Australia are provided with legal protection to carry out manipulations on experimental animals which would otherwise allow them to be prosecuted under prevention of cruelty to animals legislation. This privileged position of scientists underlines their duty of care to ensure that there is minimum pain and distress inflicted upon those animals in achieving the scientific objective of any experiment.

Community concerns about animal experimentation date back to the 19th Century, but the major impetus in Australia for developing the system of self-regulation backed by legislation that we have in place today, occurred during the 1970s and early 1980s stimulated by factors such as;

\* Paper presented at, and published in the Proceedings of the Third Pan Commonwealth Veterinary Conference, 27<sup>th</sup> - 30<sup>th</sup> June, 2003, Wellington, New Zealand, pp 13-28. Editor, S. Abdul Rahman

- \* the emergence of animal welfare/rights organizations who had major concerns about animal experimentation,
- \* the publication of enormously influential books written by philosophers and scientists such as Russell and Burch (1959) (humane experimentation), Singer (1978) (animal liberation) and Regan (1983) (animal rights),
- \* and the vandalism and violence being perpetrated against scientists and research institutions in the UK and USA.

These issues brought the animal experimentation debate into sharp focus for the government, the community and for scientists. In response to the concerns of the community and the Scientific Establishment, the Australian Government established a Senate Select Committee on Animal Welfare in 1983, to inquire and report upon, amongst a number of other animal welfare issues, animal experimentation. The Select Committee findings were published in a report (Anon, 1989), hereafter referred to as the Senate Report. The Senate Report (3.59) states that "The autonomy and clearly demonstrated capacity of animals to experience pain, though varying in degrees, is enough to establish that human beings, as moral agents, have real and substantial obligations and duties toward them. Anyone involved in the use of animals for research purposes is therefore accountable to the wider community for the performance of those duties". The exhaustive process and publicity surrounding this inquiry pushed the scientific community and the various governments into getting their houses in order. It is encouraging to re-read the Senate Report in the year 2003 and see that all but a handful of the twenty recommendations have been addressed in the intervening years.

### Community expectations

A majority of the community expects advances in science to provide them with a plentiful supply of cheap, safe food, with new products and procedures to improve the health and wellbeing of themselves and their domesticated animals, to improve the lot of wild animals and ensure a sustainable environment. The human condition also has as one of its core values the advancement of knowledge per se and this is a particularly strong value in scientists. At the present time it is impossible to achieve all of these outcomes without using experimental animals. At this point community expectations can become sharply divided.

There has been little formal survey of community attitudes to the use of animals in research in Australia.

The Senate Report (1.19) quotes a 1989 Morgan Gallup Poll published in *The Bulletin* that "There is no doubt that the majority of the population supports biomedical research involving the use of animals provided that effective controls are operating to keep the number of the animals and the level of pain and distress to a minimum. Until such time as the majority of Australians are persuaded that animal experimentation should not be carried out, and that is translated into legislative form, experimenters have a right to use animals within the regulations and guidelines imposed on such use by government and the scientific community". Australia has thus far been free of the excesses of violence that have characterized the debate in the UK and USA and the Senate Report (1.23) optimistically states that "Institutions and government have a responsibility to ensure that animal experimentation is conducted humanely in accordance with approved rules and guidelines. By fulfilling that responsibility and by keeping the public informed of the extent and nature of animal experimentation, public disquiet should be kept to a minimum". A recent Morgan Gallup Poll commissioned by Meat & Livestock Australia (Anon, 2000) showed that "The level of concern about animal welfare issues has increased from 1994 to 2000. Experiments using animals remains the issue mentioned by the greatest number of people (54% : 62%) ...". Both the Royal Society for Prevention of Cruelty to Animals Australia (RSPCA Australia) and the Australian and New Zealand Federation of Animal Societies (ANZFAS) have official policies which do not accept experimentation using animals as appropriate. However, both organizations play a constructive role as external members of AECs (Animal Ethics Committees) constituted under State/Territory legislation as described in the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (hereafter referred to as the Code). RSPCA policy states in part that "RSPCA Australia is opposed to the use of live animals in experimentation ... (but) accepts that until alternative techniques are developed the use of live animals in some experiments will occur. If suffering is observed (which manifests itself in abnormal behaviour) then the experiment should cease immediately or anaesthesia be used, and in any event, where required analgesics be used" (Strachan, 1994).

Internationally there have been some comprehensive surveys published (Pifer et al, 1994; Aldhous, 1999). These surveys clearly demonstrate that the response of the community to questions about attitudes to animal experimentation depends upon how the questions are framed. The MORI Poll (Aldhous, 1999) showed that a 'cold start' question as to whether people "agreed or disagreed that scientists should be allowed to experiment on animals" met with hostility, 64 percent against and just 24 percent for. When the question was modified to "Some scientists are developing and testing new drugs to reduce pain,

or developing new treatments for life-threatening diseases such as leukaemia and AIDS. By conducting experiments on live animals, scientists believe they can make more rapid progress than would otherwise have been possible", the responses varied more widely depending upon;

- \* the perceived benefit to humans
- \* whether pain, illness, surgery or death of the experimental animals is involved
- \* the species involved e.g. mice versus monkeys

For example, an 83% approval rate for the use of mice in experiments for a cure for leukaemia if they are not subjected to pain, illness or surgery. This dropped to 69% support if mice were to suffer or die. With experiments to develop a new painkilling drug the corresponding figures were 73% and 60% respectively. For the experimental use of monkeys to find a cure for leukaemia, corresponding figures for no suffering versus suffering or death were 75% and 53% respectively. To develop a new painkilling drug using monkeys there was a further fall in support to 64% and 33% respectively. The article concluded that "the implication is that the public's mind is not made up on these issues. Most people are willing to be persuaded, although initially skeptical of the value of animal experimentation".

Birke and Michael (1992a, b) explore in detail the 'researchers dilemma' in two frank papers which explore hostile views from many in the community, and the frequently futile attempts of scientists to counter the impact of those views on the opinion of the community at large. "Science is no stranger to controversy. But, as sociologists of science have pointed out, the controversy that is intrinsic to science has to do with what it produces - how data are interpreted, for instance. By contrast, the use of animals in scientific experiments is controversial because of the way new scientific knowledge is produced. Perhaps this helps to explain why it attracts public attention: nonscientists think they do not have to be "experts" to have an opinion on the ethical issues raised by using animals. As a result, scientists' work becomes seen as uncertain and open to public debate" and "For several researchers, a part of the problem of communicating with non-scientists was that the public did not appreciate the scientists' own ways of negotiating a moral standpoint. Nor did the public recognize that research need not always be gruesome or painful. One example of this was expressed by those scientists whose research did not involve any invasive procedures but relied on making observations of the animals; the public, in their

experience, always expected animal research to be about cutting things up, or about testing trivial commercial products".

In Australia a number of issues in recent years have highlighted increasing community concern and suspicion about science and scientists, given more impetus by recent debate about gene technology. Scientists have often been reluctant to enter public debate on the issues, and when they do so are often ill-prepared to present a persuasive case that the public can understand let alone accept. The remainder of this paper describes measures that have been put in place in Australia with the aim of providing the majority of the Australian public with the reassurance that they need to feel comfortable about the use of animals in research.

### Regulation by the States and Territories

All of the States and Territories have legislation in place to regulate the use of animals in research. This has sometimes been by amendment of existing prevention of cruelty to animals legislation, the development of animal welfare acts, or in the case of New South Wales a specific new animal research act. Table 1 shows the legislation that is in place in Australia. There is no Australian Commonwealth Government animal welfare legislation, although it was a recommendation in the Senate Report. The system in Australia can best be described as self-regulation backed by legislation. All of the State/ Territory legislation enshrine conformance with the Australian Code in their legislation. The governments are signatories to the Code through the Primary Industries Standing Committee and each State/Territory provides a representative on the Code Liaison Group (CLG) which periodically revises the Code. The Code is therefore an important harmonizing document in the way that different legislation in the various states is applied. The States/Territories, in one form or other, license/register/accredit scientific establishments, institutions or corporations to carry out research using animals (they also oversee the use of animals for biological testing and teaching).

There is variation amongst the States/Territories in the mechanisms in place for monitoring performance of AECs and inspecting animal facilities. The most sophisticated of these is the Animal Research Review Panel (ARRP) in New South Wales which has broad-based membership from the community and oversees the effectiveness and efficiency of the legislation in that State. Their Annual Report for 2000-01 (NSW Agriculture) is exemplary. Other States/Territories have public input into the way they implement their legislation by broadly based Animal Welfare Advisory Committees (AWACs).

**Table 1. Legislation regulating the use of animals in Research in Australia**

State/Territory	Legislation
Queensland	Animal Care and Protection Act 2001
New South Wales	Animal Research Act 1985 (amended 1997, and currently under review)
Victoria	Prevention of Cruelty to Animals Act 1986
Tasmania	Animal Welfare Act 1993
South Australia	Prevention of Cruelty to Animals Act 1985
Western Australia	Animal Welfare Act 2002
Northern Territory	Animal Welfare Act 2000
Australian Capital Territory	Animal Welfare Act 1992

The level of monitoring of institutions is variable and has been a subject of great concern to Animals Australia (ANZFAS). At the 1999 AGM of ANZFAS the following resolution was passed;

"Therefore Animals Australia (ANZFAS) seriously questions the value of the AEC system, particularly as in many States/Territories there is little effective assessment of AEC performance.

Animals Australia (ANZFAS) hereby puts the research community 'on notice' that unless prompt redress of this situation occurs, it will recommend to its member societies and supporters that they withdraw their services as Category 'C' (animal welfare) members of AECs".

The level of concern over this issue resulted in the National Health and Medical Research Council (NHMRC) introducing a comprehensive system of 3-yearly external inspections for holders of NHMRC research grants (much like the ARRIP in NSW), but this process has not been accepted more widely beyond this as yet. While the situation has improved there are still some concerns among the welfare groups (Glenys Oogjes, personal communication).

Other activities undertaken by the States include support for AECs (including training of external members), handling complaints, and in some cases collecting statistics on animal use. This latter activity is unfortunately highly variable at this time, and as a consequence there are no collated national annual statistics for animal use in Australia (contrary to a recommendation in the Senate Report).

The Australian Code of Practice for the Care and Use of Animals for Scientific Purposes, 6th Edition, 1997 (the Code).

The Code had its genesis when the 69th Session of the National Health and Medical Research Council (NHMRC) approved a Code of Practice for Experiments in Animals prepared by the NHMRC Experiments in Animals (Reference) Sub-Committee. The original Code had four sections - humane conduct of experiments, provision and production of animals, animal care and personnel training. Six appendices gave special requirements for different species of animals and the document numbered twenty six pages in total. In 1979 the CSIRO and the NHMRC joined together to produce a revised Code of Practice for the Care and Use of Animals in Australia. The stated aim of this Code was;

- \* "to emphasise the responsibilities associated with experiments involving the use of animals,
- \* to promote an attitude which will encourage the efficient and considerate treatment of animals so that the degree of stress or discomfort produced is no greater than would be accepted as reasonable and tolerable by community standards,
- \* to ensure that the research is not prejudiced by inefficient experimental techniques and lack of care of the animal,
- \* to provide references to more detailed information on the care and use of animals in research".

This Code was further revised by the CSIRO and NHMRC in 1981 and 1982. The 1982 edition for the first time introduced a requirement for institutions to appoint Animal Ethics Experimentation Committees (AEECs) to approve experiments. Their responsibilities were outlined in one and a half typed pages compared with nine printed pages in the current (1997) Code. In 1985 the Australian Agricultural Council (which later became the Agricultural Resource Management Council of Australia and New Zealand (ARMCANZ) and is now the Primary Industries Ministerial Council (PIMC)) joined CSIRO and the NHMRC as signatories to the revised Code of Practice for the Care and Use of Animals for Experimental Purposes. This facilitated a direct link for the State/Territory governments to incorporate a requirement to abide by the Code into their own animal welfare legislation. The same signatories were party to the 1990 revision of the Code which now used the term "use of animals for scientific purposes" in its title



rather than "experimental purposes" as previously. This allowed a broader definition of a Scientific Purpose as "All those activities performed to acquire, develop or demonstrate knowledge or techniques in any scientific discipline, including activities for the purposes of teaching, research, diagnosis, product testing, and the production of biological products". This considerably expanded the scope of the Code and thus what could be enforced under legislation. The current (1997) edition of the Code gives its purpose as "to ensure the humane care of animals used for scientific purposes, including teaching. Its aims are to:

- \* emphasise the responsibilities of investigators, teachers and institutions using animals;
- \* ensure that the welfare of animals is always considered;
- \* ensure that the use of animals is justified;
- \* avoid pain or distress for each animal used in projects; and
- \* promote the development and use of techniques which replace animal use in scientific and teaching activities".

The Code establishes Animal Ethics Committees (AECs) to verify that the case for animal use is justified by proper cost/benefit analysis and to ensure adherence to the principles of Replacement, Reduction and Refinement, (the Three Rs, Russell and Burch, 1959). The 1997 edition of the Code also expands the definition of scientific purposes to include field trials and environmental studies. Significantly the definition of animal is expanded to make it clear that any "live non-human vertebrate" includes "fish, amphibians, reptiles, birds and mammals, and encompassing domestic animals, purpose-bred animals, livestock and wildlife" is covered by the Code. It also explicitly sets out the principles of the Three Rs;

- \* "the replacement of animals with other methods,
- \* the reduction in the number of animals used, and
- \* the refinement of techniques used to reduce the impact on animals",

and provides examples of how these objectives can be achieved.

Specific new chapters were included on the care and use of livestock for scientific and teaching activities

and studies on wildlife. While the Code mandates approval of all projects by AECs, it points out clearly that "Investigators and teachers have direct and ultimate responsibility for all matters related to the welfare of their animals. They must act in accord with all requirements of this Code".

The CLG that revised the 1990 edition of the Code included in addition to CSIRO, NHMRC and ARMCANZ representatives, the Australian Vice Chancellors Committee (AVCC), the Australian Research Council (ARC) and welfare organizations (RSPCA and ANZFAS). In addition to specifying the requirements needed to carry out experiments with animals, the Code also provides guidance to help implement its recommendations and a wealth of references to resource material for researchers, AEC members and animal care staff. The 1997 edition of the Code is presently being revised by the CLG and a second draft for public consultation has been posted on the NHMRC website.

### Animal Ethics Committees (AECs)

Although the NHMRC/CSIRO 1982 Code revision recommended establishment of AEECs, and funding bodies like the NHMRC required that all proposals for funding to them be approved by AEECs, the Senate Report concluded (16.17) that "In practice, there was little effort made to secure compliance with the Code of Practice by experimenters and institutions. Many ethics committees did not carry out their responsibilities and some institutions did not even have ethics committees in operation. The NHMRC and other funding bodies had no resources to monitor compliance and they depended on statements of compliance from experimenters and institutions". Compliance has vastly improved since 1989 and it would be surprising if there are any institutions using animals in research at the present time that do not have an AEC.

The 1997 Code specifies that all institutions must "establish one or more AECs directly responsible to the governing body of the institution or its delegate. Where animal usage is small, an institution may access an external AEC". It also states that "AECs must ensure that animal care and use within the institution is conducted in compliance with this Code and incorporates the principles of Replacement, Reduction and Refinement" and "AECs must have terms of reference which include provisions to;

- \* monitor the acquisition, transport, production, housing, care, use and disposal of animals,
- \* recommend to the institution any measures needed to ensure that the standards of this Code are maintained,

- \* examine and approve, subject to modification, or reject written proposals relevant to the use of animals in scientific and teaching activities. Also to approve only those studies for which animals are essential and which conform to the requirements of this Code, taking into consideration ethical and welfare aspects as well as scientific or educational value,
- \* formally withdraw approval for any project or authorize the treatment or humane killing of any animal,
- \* examine and comment on all institutional plans and policies which may affect animal welfare,
- \* maintain a register of approved projects, and
- \* perform all other duties required by this Code.\*

Membership of an AEC must be at least four persons, including a separate person appointed to each of the following categories;

**Category A.** A person with qualifications in veterinary science, with experience relevant to the activities of the institution or, in special circumstances, a person with qualifications and experience to provide comparable expertise,

**Category B.** A person with substantial recent experience in the use of animals in scientific or teaching activities,

**Category C.** A person with demonstrable commitment to, and established experience in, furthering the welfare of animals, who is not employed by or otherwise associated with the institution, and who is not involved in the care and use of animals for scientific purposes. The person should where possible be selected on the basis of active membership of, and nomination by, an animal welfare organization, and

**Category D.** An independent person who does not currently and has not previously conducted scientific or teaching activities using animals, and who is not an employee of the institution, except under defined circumstances.

The Code also provides detailed guidelines for submission of proposals by scientists to an AEC, for operating procedures, for assessing proposals, for monitoring, annual review, reporting and record keeping.

How well are AECs currently performing their key role in ensuring compliance with the Code? As stated previously, great progress has been made since the Senate Report in 1989. In part, this has been brought about by increased awareness of the legislation in the various States/Territories and the potential drastic impact on the research programs of an institution for getting it wrong. Although there are still a few scientists who believe that they are overregulated and that they are the best judge of what should or should not be done, most contemporary scientists believe that the ethical positions for use of animals in research exemplified by the guidelines in the Code are reasonable. One of the strengths of the AEC system is that it provides a mechanism for community input into judgments made concerning the use of animals in a particular research project. The Category C and D members have to be convinced that the costs to the welfare of the animals being used are outweighed by the benefits that will accrue to humans or other animals if the outcomes are achieved. This is probably the most difficult issue facing external members of AECs, especially category C members. Representatives from welfare organizations are generally already compromising their personal principle that animals should not be used for research simply by agreeing to be a member of an AEC where the majority of projects put forward will be approved. We are fortunate that these members are prepared to assist in making such judgments on behalf of the community.

Although the enforced self-regulation of animal research has improved greatly during the past 10 years there is still some disquiet over the process, particularly amongst the animal welfare groups (see earlier the resolution of the ANZFAS AGM in 1999; Oogjes, 1992, 1996; Glenys Oogjes, personal communication) who identify areas of concern such as;

- \* better audit and inspection of AECs and institutions,
- \* better training for external AEC members,
- \* belief that not enough effort is being put by AECs into replacement.

It is likely that the level of scrutiny of research with animals will never be enough for some groups in the community and will always be too much for others. Scientists and regulators must work together to ensure that the general public has confidence in the system.

The Australia and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART).

ANZCCART began life as ACCART, the Australian Council for the Care of Animals in Research and Teaching in 1987. The first major sponsors were the CSIRO, the AVCC and the NHMRC. The organization was initially located within CSIRO at its headquarters in Canberra, but in 1992 moved to the University of Adelaide with a full-time Executive Officer and Assistant. In 1993 the Australian Research Council and the Royal Society of New Zealand became major sponsors and ACCART became ANZCCART which became incorporated as a non-profit company in 1994. The structure of ANZCCART is that of a Board of Directors and a Council with a wider representation of stakeholders.

ANZCCART's corporate mission is to:

- \* promote excellence in the care of animals used in research and teaching,
- \* ensure that the outcomes of the scientific use of animals are worthwhile, and
- \* foster informed and responsible discussion and debate within the scientific and wider community regarding the scientific use of animals.

ANZCCART operates on a purely advisory basis and provides guidance and information to all interested parties, including members of animal ethics committees, scientists, teachers, regulatory authorities, granting agencies, government, animal welfare organizations, the media and the general community.

ANZCCART fulfills its mission by:

- \* addressing in a balanced and considered way the distinctive scientific, ethical and social issues associated with the use of animals in research and teaching,
- \* being an independent body which provides a national and international (with NZ) focus for consideration of these issues,
- \* promoting effective communication and cooperation between all those concerned with the care and use of animals in research and teaching,
- \* assisting in the resolution of potential conflicts by promoting awareness of concerns and solutions to problems, and by
- \* assisting the scientific and teaching communities to be aware of and be responsive to community concerns.

ANZCCART provides support to Universities, CSIRO and other users of animals in research and teaching by providing ready access to the latest ideas and methods about the responsible scientific use of animals, by giving advice on how to implement the Three Rs, by providing support for effective operation of Animal Ethics Committees by holding annual conferences on topical issues with published proceedings and running workshops on specific issues, publishing a quarterly newsletter (ANZCCART News), major publications on specific topics and providing a website as a source of information. ANZCCART has published eleven conference proceedings and six monographs, and conducted ten workshops between 1995 and 2002. In 2002 ANZCCART organized a conference entitled "Animal Welfare and Animal Ethics Committees - Where are the Goalposts Now". The theme of this conference was arranged to allow practical exploration of issues faced by category C and D members on AECs. Of the 150 delegates at the conference approximately half were category C and D members. The eight sessions were:

- \* Designing new learning events,
- \* GMO issues for AECs,
- \* The public/animal user interface (transparency and accountability),
- \* Non-institutional (external) animal users,
- \* Planning to achieve animal welfare outcomes,
- \* Personal perspectives on animal ethics, and
- \* Team decision making on AECs.

Feedback suggested that the conference was highly successful and this sort of activity exemplifies the manner by which ANZCCART achieves its mission. Bradshaw (2002) carried out a comparison of the ethical review processes in the UK and Australia and states "One of the key elements to the success of the Australian system is an organization called the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) ... Facilitation and communication between all interested parties may be greatly enhanced in the UK by the development of an organization similar to ANZCCART with a similar mandate. It could be called UK-CCART".

### Some Comparisons

The UK has stringent 'top-down' controls in place over animal experimentation, with individual licensing of experimenters, centralized review and licensing of

individual projects and a full-time inspectorate to enforce the laws. More recently the UK has moved to institute a local Ethical Review Process (ERP) in institutions (Bradshaw, 2002). Bradshaw states that "The aims of the ERP are: first to provide independent ethical advice to the certificate holder (institution), particularly with respect to project licence applications and standards of animal care and welfare; second, to provide support to named people and advice to licensees regarding animal welfare and ethical issues arising from their work; and third, to promote the use of ethical analysis to increase awareness of animal welfare issues and develop initiatives leading to the widest possible application of the Three Rs." In this sense the UK is moving a little toward the Australian system.

The system of regulation in New Zealand (NZ) and its evolution was described by Reid (1989) and Bayvel (2000). Bayvel (2000) outlines the current system: "It is essentially one of enforced self-regulation, with a National Animal Ethics Advisory Committee (NAEAC) and institutional Animal Ethics Committees (AECs) providing the national infrastructure, which enables individual scientists and others using live animals to accept a personal, ethical responsibility. The system is flexible, cost-effective, politically and publicly credible, and provides statistical information regarding animal use to meet national public policy needs. A classification system for animal use was introduced in 1997 after considerable development effort and consultation. To further reduce adverse effects, and in keeping with the principles of total quality management, the system has been the subject of regular refinement. An AEC assessment initiative has been developed and introduced in recent years. A number of research activities relating to replacement and refinement are also undertaken with either government or private sector funding. The Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) plays an important national role in ensuring awareness of legal obligations within the scientific community, in increasing "ethical literacy", and in promoting and fostering informed debate on the responsible and humane use of live animals in research, testing and teaching. New legislation will embody the principles of the Three Rs and will mandate regular reviews of the effectiveness of AECs."

A significant difference between the New Zealand and Australian system is that New Zealand has a single national Animal Welfare Act 1999 which makes administration less complex than in Australia. Another major difference is that New Zealand does not have a national code of practice embedded in the legislation. Instead there is a stand alone section (Part 6) of the Animal Welfare Act which describes, in detail, the legal requirements which apply to the use of live animals in research, testing and teaching and

the production of biological products. A voluntary Code of Recommendations and Minimum Standards for the Care and Use of Animals for Scientific Purposes compiled by the Animal Welfare Advisory Committee in 1995, and which drew heavily on the Australian Code, was effectively replaced in 2002 by NAEAC's Good Practice Guide for Research, Testing and Teaching. Under the New Zealand Animal Welfare Act each institution must produce its own Code of Ethical Conduct (CEC) which is approved by the Minister on the recommendation of NAEAC. Each CEC has to be revised every 5 years and both institutions and their AEC reviewed by an inspection prior to re-accreditation by the Ministry of Agriculture and Forestry.

## The Future

NAEAC in New Zealand has recently produced a five page brochure, entitled "A Culture of Care", which gives some insight as to the direction that regulation of animal experimentation might move into the future.

The brochure states;

1. "Anyone responsible for the welfare of animals used in research, testing or teaching has a duty of care, which is defined under the Animal Welfare Act 1999. Discharging this duty involves more than the basics of animal care. It involves a genuine commitment to the welfare of the animals, a respect for the contribution they make to your work, and a desire to enhance their well-being beyond the minimum standards: in short, a culture of care.
2. This guide is published by the National Animal Ethics Advisory Committee (NAEAC) for scientists, technicians and teachers who use animals in their work and are responsible for their welfare.
3. It summarises the legal requirements, but also provides a framework of understanding for going beyond the legal minima. The guidelines are designed to help keep researchers and teachers in touch with, and responsive to, society's rapidly evolving attitudes towards the relationships between people and animals".

Can we move from our system of enforced self-regulation to a culture of care where each scientist instinctively takes account of all of the guidelines in our various Codes? Will the public ever accept that scientists can be trusted enough to do this without the elaborate systems of regulation that we currently have in place?

Rose (1994) writes "In this public debate, the scientist has an important but difficult role to play.... Nevertheless, the involvement of scientists is critical if we are to achieve constructive outcomes to these issues. All aspects of the debate must be considered and scientific information is an integral part of this process. Not only is the scientist the person best placed to provide relevant scientific input, but, as the practitioner, his (or her) participation in and commitment to the decision-making process will ensure the effective implementation of decisions".

I strongly believe that during the past 10 years there have been major steps forward in the regulation of animal experimentation and that most scientists have been willing participants in the process. If all AECs during the next 10 years pursue their role conscientiously, and a 'culture of care' becomes the norm in the scientific community, then the present heavy demands placed on decision-making by AECs will be substantially reduced or maybe even eliminated altogether.

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## Emerging African Animal Diseases

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### Summary/Abstract

Emerging and re-emerging African animal diseases are discussed within the framework of the OIE (Office Internationale des epizooties) classification of animal diseases. List A animal diseases as reported to the OIE by African member states were examined for the last six years. Foot and Mouth Disease, Lumpy Skin Disease, African Swine fever, Rift Valley fever and Newcastle disease remains a threat against profitable livestock production and trade. The introduction of early warning systems within a regional strategy and linked to international organizations concerned with animal disease control such as OIE and FAO (Food and Agricultural Organization) appears to be the only viable alternative. National investment in such programmes must be coupled with incentives while international investment should be channeled through facilities such as the New Partnership for African Development (NEPAD).

### Introduction

Horznick (2001) traced back the term emerging diseases to the FAO (Food and Agricultural Organization of the United Nations) who used the term as a book title in 1966 to describe viral disease which are able to spread beyond their known geographical boundaries. The National Academy of Sciences of the United States in response to Aids, Ebola and the re-emergence of tuberculosis then defined it as diseases whose incidence has increased within the past two decades or threatens to increase in the near future. The rapidly spreading ability of viruses, transmission patterns, environmental stability, its pathogenesis, threat to animal health, productivity and profitability of farming enterprises and zoonosis means they would feature prominently in any listing of emerging diseases (Horznick, 2001). Seimenis (2003) categorizes zoonoses according to the outcome of a Regional Conference on Emerging and Re-emerging zoonotic diseases, which was held in Cairo in 1995 into four categories:

- \* Due to pathogens previously known, but occurring in places or in animal species where the diseases was previously unknown (Category 1);

- \* Occurring as epidemics in places where only rare/sporadic cases were reported before (Category 2);
- \* Due to totally new or partially new agents (Category 3);
- \* New animal diseases which are not proven to be zoonoses but which have implication for human health\*.

Recent upsurges in animal disease outbreaks has promoted the FAO in collaboration with international standard setting bodies to develop a Global Early Warning System on Trans-boundary Animal Diseases (TAD's) (FAO, 2003). These upsurges are linked to mobility of people, goods and livestock, changes in farming systems and practices, the weakening of livestock health services and the type of training veterinary personnel are exposed too. The FAO believes (FAO, 2003) that these trends indicate that early warning is one of the weakest links in diseases surveillance systems. Vidaver (1996), who with colleagues briefed a congressional committee on emerging and re-emerging diseases, shares this view. It is with this in mind that the new TAD is being developed which would be linked to the OIE's official disease reporting system and it would focus on the major epizootics namely Foot and Mouth Disease (FMD), rinderpest, Rift Valley fever (RVF), African swine fever (ASF) and avian influenza. Outbreaks of FMD in Taiwan in 1997, FMD in Algeria in 1999, ASF in Tanzania in 2000 and RVF in East Africa in 1997/8 might have had different outcomes if better early warning systems were in place (FAO, 2003). This emphasis on early warning is somewhat different to the approach in a developed region such as the EU where managerial qualities, integrated systems, on farm disease risk management (HACCP) are emphasized in addition to disease control strategies (Noorduizen, 2001).

The option of emergency preparedness in the light of recent economic developments is also favored by Roeder et al. (1998). They argue that this is inevitable in the light of budget cuts, reduction of veterinary personnel and less frequent vaccination programmes. African countries used to maintain large quantities of veterinary personnel and auxiliary staff who spent time

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during frequent outbreaks of rinderpest, contagious bovine pleuropneumonia (CBPP) and FMD on mass vaccination programmes. A recent success in transboundary emergency preparedness has been the efforts of PARC (Pan-African Rinderpest Campaign - a project funded by the EU through OAU/IBAR (Organization of African Unity/Inter-African Bureau for Animal Resources)) to contain rinderpest in isolated foci in East Africa (Roeder et al 1998). The same cannot be said for CBPP in sub-Saharan Africa, ASF in East and southern Africa and RVF in East Africa where a lack of emergency preparedness mitigated against rapid containment and elimination.

At a seminar organized by the OIE in Dakar, Senegal (World Veterinary Association, 1999a) regional cooperation on all aspects of epidemiological surveillance in French speaking Africa countries were strengthened in an effort to contain outbreaks of production limiting diseases such as rinderpest, CBPP and AFS. Several recommendations were adopted to improve the methods of collecting and processing animal health information and surveillance. This was followed by a Conference of the Regional Commission of the OIE in January the following year where the pivotal discussions were the reorganization of African Veterinary Services (World Veterinary Association, 1999b). These discussions were conducted in response to outbreaks of RVF, ASF and rinderpest at the time. The conclusion was that Veterinary Services in many African countries were under-resourced because of the structural adjustment programmes and therefore alternative solutions had to be found. These were: "an extension of the scope of the health mandate, the introduction of a cost recovery policy, the establishment of working relations and collaboration with the private sector in the field of epidemiological surveillance, training and public information, and the development of a legislative framework allowing the installation and operation of private veterinary practices". Essentially this meant the privatization of some of the state's disease control functions.

The increased significance of emerging or/and re-emerging animal diseases prompted the author to evaluate the OIE Handistat II database collectively by country to distinguish any patterns which would lend support to some of the current definitions of emerging animal disease based on transboundary/geographical spread.

## Methodology

Data on the occurrence and outbreak of OIE list A diseases in Africa over the last six years was collected from the Handistatus II database of the OIE (OIE, 2003). Data for 2002 is not yet available on Handistatus II.

The OIE is the international standard setting body for animal diseases and is recognized as such by the WTO (WTO, 2003). Member countries are obliged to regularly report to the OIE on the animal disease status of their country and these reports are made available to other member countries. This form of transparency is important in preventing the trans-boundary spread of animal diseases and the safeguarding of countries where the disease is under control or does not occur. Countries are allowed to embark on measures to safeguard animal, plant and human health within their boundaries against threats from outside according to the Sanitary and Phytosanitary (SPS) agreement of the WTO (WTO, 2003).

## Results

The results are captured in tables 1 and 2. Table 1 compares OIE list A and some list B diseases (except swine vesicular and vesicular stomatitis disease - no data for the African continent) over a six year period.

Table 2 depicts countries where outbreaks occurred after they were declared free of the disease (according to the OIE standards) or the disease was never reported (meaning the disease never occurred for a lengthy period of time in that country).

## Discussion

**FMD** - A disconcertingly high quantity of countries reported the disease (on average 50%) present with the number of countries reporting outbreaks after having the disease under some form of control increasing. There appears to be an increase in outbreaks in the Southern African region in the last three years.

**Rinderpest** - The number of countries considered to be disease free from a specific date remains high (60%). The disease exists in isolated foci in wildlife e.g. Kenya and there is a real possibility that this disease can be eradicated from the African continent.

**Peste des petits ruminants** - This disease is present mainly in countries in the northern sub-Saharan where few new outbreaks have been reported.

**CBPP** - The number of countries reporting the presence of CBPP peaked during 1998/1999. The only new outbreak was Zambia in 2000. The disease remains present in approximately a third of the countries and the potential for trans-boundary introduction persists especially with uncontrolled cattle movements.

**LSD** - This disease remains a threat although widespread outbreaks seem to have abated. The number of countries reporting the presence of the disease has increased and the countries free from the disease are declining.

Table 1		1996	1997	1998	1999	2000	2001
FOOT AND MOUTH DISEASE	Reported present or known to be present + (new outbreaks) - number of countries.	18	23	20	24	22	23
	Number of new cases.	419	316	397	1088	546	435
	Number of countries where the disease was never reported.	8	7	7	4	5	3
	Number of countries that have the disease.	18	19	17	23	18	20
	Number of countries considered disease free from a specified date.	10	11	11	9	12	10
Number of countries where the disease is present but limited to specified zones.	1	5	4	1	4	3	
RINDERPEST	Reported present or known to be present + (new outbreaks) - number of countries.	1	1	0	0	0	1
	Number of new cases.	3	4	0	0	0	1
	Number of countries where the disease was never reported.	7	9	9	7	8	5
	Number of countries that have the disease.	2	-	-	-	1	1
	Number of countries considered disease free from a specified date.	25	28	26	26	28	27
Number of countries where the disease is present but limited to specified zones.	-	-	-	-	-	-	
PESTE DES PETITS RUMINANTS	Reported present or known to be present + (new outbreaks) - number of countries.	11	16	14	12	12	13
	Number of new cases.	339	413	239	273	348	857
	Number of countries where the disease was never reported.	22	20	22	19	20	18
	Number of countries that have the disease.	12	14	13	12	12	13
	Number of countries considered disease free from a specified date.	5	4	2	2	3	3
Number of countries where the disease is present but limited to specified zones.	-	1	1	1	1	1	
CONTAGIOUS BOVINE PLEURO-PNEUMONIA	Reported present or known to be present + (new outbreaks) - number of countries.	16	21	18	20	18	17
	Number of new cases.	315	306	261	370	328	317
	Number of countries where the disease was never reported.	12	14	14	12	11	10
	Number of countries that have the disease.	12	16	15	18	15	15
	Number of countries considered disease free from a specified date.	9	7	8	7	9	9
Number of countries where the disease is present but limited to specified zones.	3	4	3	2	3	2	
LUMPY SKIN DISEASE	Reported present or known to be present + (new outbreaks) - number of countries.	17	24	22	24	27	26
	Number of new cases.	558	735	694	1044	1567	1186
	Number of countries where the disease was never reported.	7	7	7	6	5	4
	Number of countries that have the disease.	19	21	18	24	26	26
	Number of countries considered disease free from a specified date.	7	7	6	5	4	4
Number of countries where the disease is present but limited to specified zones.	-	3	3	1	1	1	



Table 1		1996	1997	1998	1999	2000	2001
RIFT VALLEY FEVER	Reported present or known to be present + (new outbreaks) – number of countries.	2	4	4	5	0	2
	Number of new cases.			139	27	0	14
	Number of countries where the disease was never reported.	19	20	19	16	16	17
	Number of countries that have the disease.	6	6	6	5	1	4
	Number of countries considered disease free from a specified date.	7	6	7	6	10	7
	Number of countries where the disease is present but limited to specified zones.	-	1	-	-	-	-
BLUETONGUE	Reported present or known to be present + (new outbreaks) – number of countries.	2	6	5	5	6	5
	Number of new cases.	138	9	82	87	212	31
	Number of countries where the disease was never reported.	10	11	11	8	8	6
	Number of countries that have the disease.	11	8	6	6	7	5
	Number of countries considered disease free from a specified date.	8	6	9	11	11	11
	Number of countries where the disease is present but limited to specified zones.	-	1	1	-	-	-
SHEEP AND GOAT POX	Reported present or known to be present + (new outbreaks) – number of countries.	7	15	14	15	15	14
	Number of new cases.	152	379	310	180	307	355
	Number of countries where the disease was never reported.	13	12	13	9	9	7
	Number of countries that have the disease.	11	14	13	15	16	16
	Number of countries considered disease free from a specified date.	7	4	5	5	4	4
	Number of countries where the disease is present but limited to specified zones.		1	1	-	-	-
AFRICAN HORSE SICKNESS	Reported present or known to be present + (new outbreaks) – number of countries.	8	9	6	9	11	7
	Number of new cases.	157	119	169	195	209	184
	Number of countries where the disease was never reported.	10	8	7	5	9	6
	Number of countries that have the disease.	11	10	6	8	7	7
	Number of countries considered disease free from a specified date.	10	11	15	12	11	11
	Number of countries where the disease is present but limited to specified zones.	-	-	-	1	-	-
AFRICAN SWINE FEVER	Reported present or known to be present + (new outbreaks) – number of countries.	9	14	14	12	12	18
	Number of new cases.	32	150	110	333	160	318
	Number of countries where the disease was never reported.	16	12	14	11	13	11
	Number of countries that have the disease.	8	9	10	11	11	16
	Number of countries considered disease free from a specified date.	5	5	5	6	8	6
	Number of countries where the disease is present but limited to specified zones.	2	6	4	1	1	2

Table 1		1996	1997	1998	1999	2000	2001
CLASSICAL SWINE FEVER	Reported present or known to be present + (new outbreaks) - number of countries.	2	1	1	1	2	2
	Number of new cases.	12	4	10	5	5	30
	Number of countries where the disease was never reported.	25	23	24	21	24	22
	Number of countries that have the disease.	2	2	1	2	2	2
	Number of countries considered disease free from a specified date.	3	3	2	2	2	2
HIGHLY PATHOGENIC AVIAN INFLUENZA	Reported present or known to be present + (new outbreaks) - number of countries.	-	-	-	-	-	-
	Number of new cases.	-	-	-	-	-	-
	Number of countries where the disease was never reported.	17	16	19	17	20	17
	Number of countries that have the disease.	2	1	1	-	-	-
	Number of countries considered disease free from a specified date.	5	5	5	5	5	5
NEWCASTLE DISEASE	Reported present or known to be present + (new outbreaks) - number	26	32	29	27	28	26
	Number of new cases.	709	738	527	624	879	875
	Number of countries where the disease was never reported.	-	-	-	-	1	-
	Number of countries that have the disease.	28	34	30	29	32	28
	Number of countries considered disease free from a specified date.	9	7	6	5	5	8
	Number of countries where the disease is present but limited to specified zones.	-	-	-	-	-	-
		49	49	49	49	49	49

**RVF** - New outbreaks seem to have declined after several outbreaks in the horn of Africa approximately 6 years ago. It is probable that the next rainy cycle we would again see increased outbreaks.

**Bluetongue** - Few new outbreaks were reported but of note were outbreaks along the Mediterranean and Southern Europe ascribed to the northward migration of the vector.

**Sheep and goat pox** - Outbreaks persisted in the central and northern African region with more countries reporting that they have the disease.

**African horse sickness** - The number of outbreaks remain few but static.

**African swine fever** - The number of countries have the disease is on the increase similarly to the number of countries reporting new outbreaks.

**Classical swine fever** - The disease is confined to the island states where outbreaks recur. Its potential introduction to the mainland remains a threat.

**Highly pathogenic avian influenza** - Recently an outbreak was reported in Senegal.

**Newcastle disease** - This disease is widespread (60% of the countries have the disease) with very few declared disease free from a specified date.

The overall impression of the African continent is that the battle to contain FMD, LSD, ASF, RVF and Newcastle is not bearing fruit similarly to successes in the control of rinderpest. The reasons are varied notwithstanding the continent's lack of resources to successfully control or eradication major animal diseases. Some of the reasons are summarized next.

**Reasons for Increase in Emerging and Reemerging Infectious Diseases** (Vidaver, 1996; Geiser, 2001; Seimemis, 2003)

- Human population growth, shifts, urbanization, and crowding.
- Changes in human behavior

Table 2	1998	1999	2000	2001	2002/2003
FOOT AND MOUTH DISEASE	Malawi (type O), Uganda (type O), South Africa (SAT 1, 2,nd 3), Eritrea (SAT 2, A)	Algeria, Chad, Morocco, Tunisia	Zambia, Mauritania (type O), South Africa (type O and SAT 1), Malawi, Namibia, Swaziland, Zambia (all SAT 1), Zimbabwe (SAT 1 and 3), Egypt, Namibia	Malawi, Mali, Uganda, Cameroon. (type A), Kenya (type A), South Africa (type O, SAT 1 and 2), Namibia (SAT 1), Swaziland (SAT 1), Zimbabwe (SAT 2), Eritrea, Guinea	Zambia (suspected), Mozambique (SAT 1), Swaziland (SAT 1), Botswana (SAT 2), Zimbabwe (SAT 2)
RINDERPEST			Kenya (serological evidence)	Kenya (in Cape buffalo)	Kenya (suspected)
PESTE DES PETITS RUMINANTS	Eritrea, Mali			Niger	
CONTAGIOUS BOVINE PLEURO-PNEUMONIA	Chad	Burkina Faso	Zambia	Guinea	
LUMPY SKIN DISEASE	Botswana, Eritrea, Lesotho, Mozambique, Senegal	Chad, Mali, Niger, Burkina Faso	Mauritius, Mozambique, Senegal, South Africa, Eritrea, Namibia, Ivory Coast	Ghana, Guinea	
RIFT VALLEY FEVER	Kenya, Mauritania, Tanzania, Zimbabwe, Senegal	South Africa, Mozambique		Zimbabwe	Mauritania, Senegal
BLUETONGUE	Kenya, Lesotho	Namibia, Tunisia	Algeria, Botswana	Zimbabwe	
SHEEP AND GOAT POX	Burkina Faso, Ivory Coast	Chad, Egypt	Eritrea, Sudan, Uganda	Morocco	Morocco
AFRICAN HORSE SICKNESS	Eritrea	Botswana, Burkina Faso, Namibia	South Africa	South Africa	

- Changes in agricultural and food practices.
- Microbial evolution (esp. selection pressure).
- Modern medicine (esp. immuno-suppression but also drug resistance).
- Global trade and travel.
- Animal migration and relocation. Increase in animal populations.
- Failure of implementing effective strategies for disease elimination.
- Closer human farm animal interfaces (in the case of zoonoses).
- Modified production methods for animal feed.
- Linkages to water management and livestock development projects (zoonoses)
- Inadequacy of public infrastructure and services.
- Ecological and climatic changes (West Nile Fever, Bluetongue, RVF, malaria, dengue fever).
- Inadequate preparation of animal health personnel in teaching institutions.

A disease not discussed here but which has a major impact on animal production is trypanosomiasis. Major efforts are underway encouraged by the successful eradication of the disease from Zanzibar using Sterile Insect Technology (SIT). Lessons learnt from the emerging and re-emergence of Bovine Spongiform Encephalopathy (BSE), tuberculosis and microsporidiosis (Shadduck et al, 1996) are that aggressive surveillance and regulation is much cheaper than containment and eradication, emerging diseases may threaten both animals and humans, research is essential for developing rapid diagnostic tests, developing new vaccines, preventing and controlling new diseases, and selecting disease resistant animals. In the case of trypanosomiasis eradication seems to be desirable.

## Conclusion

The moderate success achieved in the control of rinderpest demonstrates the necessity for;

- \* Early warning systems where appropriate coupled to existing international disease control systems of the FAO and OIE;
- \* A regional approach to disease control;
- \* Investment in African projects which address the contributing factors which favors the emergence or/and re-emergence of animal diseases through facilities such as the new Partnership for African Development (NEPAD) and
- \* Facilitation of market access for animals and animal products as an incentive to national investment in early warning and disease control programmes.

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### Repair of an open comminuted supracondylar fracture in a German shepherd dog

A Grade 1 open left supracondylar femoral fracture in an 8½-old neutered female German shepherd dog was repaired with a right lateral tibial head buttress plate applied to the lateral surface of the femur. Its unique design made it possible to place five screws in the distal fragment of the fracture, and achieve excellent stability without adversely affecting the mobility of the stifle joint. The plate overcame the limitations of standard bone plates for treating this type of fracture. The fracture healed without long-term complications.

GLYDE, M.R., LIDBETTER, D.A. AND WONG, W.T. (2003). Use of a lateral tibial head buttress plate in the repair of an open comminuted supracondylar femoral fracture in a German shepherd dog. *Irish Veterinary Journal*, 56: 87-93.

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## Emerging Diseases in Australia\*

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### Introduction

*Emerging Disease: A new or reappearing disease or syndrome brought to the attention of a relevant authority unaware of its existence or cause*

"Emerging disease" would seem to be a simple concept but in fact is not and the definition provided above bridges biological and management aspects of emerging disease. A more common definition would be "infections that have newly appeared in the population or have existed but are rapidly increasing in incidence or geographic range" (22). This excludes some highly significant problems such as bovine spongiform encephalopathy and mycobacterial diseases, which emerged or re-emerged very slowly, and does not recognise the role of competent authorities in the process of disease identification and management. Emerging diseases appear for various reasons, and if recognised, may or may not trigger a response from relevant authorities. Perhaps "newly recognised" diseases is a better term than emerging diseases. Others have recognised "true" emergence where there is a long term global trend rather than a local increase in disease occurrence (36). Regardless of definition, the circumstances associated with emergence of newly recognised diseases are summarised in Table 1.

Between 80% and 75% of emerging human pathogens are zoonotic agents (36). Furthermore all of the naturally occurring significant emerging diseases seen in humans in our region in recent years have been acquired from animals. Veterinarians have an essential role in preventing these human outbreaks because the agents may first be detected or controlled in animals.

The importance of a newly recognised disease may not be realised immediately, and sometimes not for years, and this is related to the incubation period, the rate of spread between individuals, the nature of the clinical effect and the consequences for the industry and/or for human health. An official response usually follows qualitative or quantitative risk assessment and may be influenced by the commitment of competent authorities to other problems, or by political stability.

Emerging disease may impact on international trade given the need for transparent animal health surveillance systems and disease reporting under guidelines of the Office International des Epizooties. An economic rationalist approach to animal health has emerged over the last 20 years in Australia, the United Kingdom and New Zealand, to mention a few countries. This has led to reduction in public-good activity and its partial replacement by a user-pays system. Some argue that this poses a threat to international animal disease surveillance, which traditionally has benefited both animal and human health. Others argue that the surveillance conducted today is better focussed than it was in the past. Regardless, there is a well-recognised problem of aging in the workforce of animal health professionals. Furthermore there is lack of employment and salary signals for young veterinarians to enter rural veterinary practice, state veterinary medicine and some of the specialities such as veterinary pathobiology. The extent to which these factors will impact on effective passive surveillance requires further formal assessment.

In this paper I will describe several emerging diseases from Australia, using examples from aquatic animals, wildlife zoonoses and farm animals. Non-infectious emerging diseases such as plant poisonings and mycotoxicoses will not be discussed. The examples have been chosen from several of the categories in Table 1 and contrast rapidly emerging and slowly emerging diseases. Several have direct or indirect relevance to New Zealand, the host of this conference. Recent initiatives in Australia to address the problem of emerging animal diseases will be described and some gaps identified.

### Emerging diseases in aquatic animals

Prior to 1985 no systemic viral infections were known from fish or amphibians in Australia (18), a unique global position. However, since 1985 a list of 11 viruses has been compiled from fish and amphibians in Australia (Table 2) (12). The explanation for this is largely increasing professional interest associated with the developing aquaculture industries and the availability of new technology to rapidly identify viruses (Category 6, Table 1). The Australian Fish Health Reference

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Table 1. Examples of Mechanisms for Emergence of Infectious Agents or Disease

Category	Mechanism	Examples from Australia
1. Mutation of endemic agent	Altered surface antigen or virulence factor leads to expression of disease in the same host, and/or permits transmission to other hosts	Newcastle disease virus in chickens
2. Introduction of exotic agent	Migratory species or trade in animals or products introduce agent into a naive population	Avian influenza virus in chickens* Ovine Johne's disease Pilchard herpesvirus
3. Introduction of naive animals	Movement of live animals into an area with endemic infectious agents leads to first contact and disease expression in the introduced animals	Tick fever in cattle Akabane virus
4. Contact with wildlife reservoir	Anthropogenic change, often environmental disturbance, leads to increased contact rates and transmission of agent between wildlife reservoir hosts and naive hosts	Hendra virus Menangle virus Australian bat lyssavirus
5. Vector movement	Extension of the geographic range of a vector leads to transmission of agent to naive hosts	Kangaroo blindness Akabane virus Bovine ephemeral fever virus
6. Increased surveillance	New technology or increased effort leads to discovery of infectious agents which are not associated with disease	Fish viruses Bluetongue
7. Change in host-pathogen-environment interaction	Re-emergence of endemic disease	Anthrax
8. Deliberate introduction	Introduction of natural or engineered agent in a legal or illegal biological control program, or a terrorist act	Rabbit calicivirus

\* in other countries avian influenza outbreaks have occurred through mechanism 1.

Laboratory was established at Benalla in Victoria with national funding in the early 1980s. Highly motivated staff were provided with quality diagnostic tools. This laboratory was relocated to the Australian Animal Health Laboratory where facilities are unequalled. Three of the new agents, nodavirus, pilchard herpesvirus and epizootic haematopoietic necrosis virus cause serious diseases and were discovered during outbreak investigations. EHNV and PHV are unknown outside Australia.

**Nodavirus** causes viral nervous necrosis, a syndrome with wide distribution in many species in marine aquaculture in many countries. In Australia it is a problem in barramundi *Lates calcarifer* aquaculture (23).

**Pilchard Herpesvirus (PHV)** emerged in a spectacular manner with a massive propagating

mortality event in 1995, which recurred in 1998. The 1995 outbreak spread to New Zealand, it is alleged by the Australian Broadcasting Corporation, associated with export of pilchards from the affected population in Western Australia for bait for long-line tuna fishing in New Zealand. Both the 1995 and 1998 outbreaks commenced in South Australian waters and spread in coastal waters both east and west over a distance of many thousands of kilometres, and stopped only when the geographic range of the target species, the pilchard *Sardinops sagax neopilchardus* had been exhausted. Thousands of tonnes of fish washed ashore on beaches. It is thought to be the largest mortality event ever seen in a vertebrate population, in terms of numbers of deaths and geographic extent. The official investigation that occurred during the 1995 outbreak was ineffective due to lack of planning, lack of expertise and political interference, but interested scientists in Australia and New Zealand were able to piece together a credible account of the problem and its cause (13). The

Table 2. Viruses identified in Fish and Amphibians in Australia since 1985

Species	Geographic origin	Virus
Red-fin perch ( <i>Perca fluviatilis</i> )	Victoria, 1985	EHNV
Rainbow trout ( <i>Oncorhynchus mykiss</i> )	NSW 1986	EHNV
Barramundi ( <i>Lates calcarifer</i> )	Queensland, 1989	Lymphocystis virus
Barramundi ( <i>Lates calcarifer</i> )	Queensland, 1987	Barramundi nodavirus
Atlantic salmon ( <i>Salmo salar</i> )	Tasmania, 1990	Tasmanian aquareovirus
Atlantic salmon ( <i>Salmo salar</i> )	Tasmania, 1997	Tasmanian aquabirnavirus
Flounder	Tasmania, 1996	Herpesvirus
Pilchards ( <i>Sardinops sagax</i> )	Coastal, 1995, 1998	PHV
Pilchards ( <i>Sardinops sagax</i> )	South Australia, 1998	Orthomyxo-like virus
Imported dwarf gourami	Tasmania, 1992	Iridovirus
Imported ornamental fish	Victoria, 1987	Bimavirus
Ornate burrowing frog <i>Limnodynastes ornatus</i>	Queensland 1991	Bohle iridovirus

Adapted from (12)

biological catastrophe was studied in 1998 in Western Australia where it was estimated that 60% of the pilchard biomass had been lost. The fishery was closed for a season at a cost of A\$15M (8) and there were anecdotal accounts of breeding failure in penguins in eastern Australia. Thus besides economic loss to the commercial pilchard fishery there were unmeasured environmental effects as many species of fish, mammal and bird depend on the pilchard as their principal food source. It is still uncertain whether the virus has become endemic in Australian pilchards and will continue to cause a problem. A common view is that the virus was imported with frozen pilchards from the Americas, and introduced into Australian waters through the practice of feeding imported bait fish to sea caged tuna in South Australian waters (13). Based on this view PHV is an example of a pathogen introduced into a naive population (Category 2, Table 1).

PHV was an important factor leading to a review of national quarantine and significantly enhanced funding for the Australian Quarantine and Inspection Service. Bait fish imports are now subject to individual quarantine permit. Research continues to produce a commercial pelleted ration for tuna farming as an alternative to imported baitfish.

**Epizootic Haematopoietic Necrosis Virus (EHNV)** is unlikely to have gone unnoticed if it had occurred prior to 1995 when the first outbreaks of epizootic mortality were reported in wild redfin perch in Victoria. The disease was soon found in rainbow trout on several farms, but the clinical syndrome was quite mild. Rapid diagnostic tests were developed and over a period of years the movement of the virus through wild redfin

populations was followed in river systems and impoundments (33). It spread also in rainbow trout, as it was moved progressively between farms with consignments of fingerlings (34). The source of the virus is uncertain, but related viruses exist worldwide. Cane toad populations in northern Australia are seropositive to a similar virus which has yet to be isolated. It is possible that EHNV entered Australia legally or illegally in carrier animals (for example ornamental fish, reptiles, amphibians), or that it has emerged from a wildlife reservoir in Australia (Category 2 or 4, Table 1).

EHNV was recognised as a significant disease and listed by the Office International des Epizooties as one of only five notifiable diseases of finfish. Australia's EHNV-infected status has had an impact on policy because of implications for future trade in fish products domestically and internationally. EHNV is not very host specific (17) so there is potential negative impact on the conservation of native species, some of which are threatened or endangered. However, policy to control EHNV in south eastern Australia is not uniformly developed or applied between jurisdictions.

One reason for the difficulty experienced in the investigation of PHV, and in establishing effective policy to control EHNV is the separation of powers in Australia, at both Federal and State level. In New South Wales animal disease control is administered by the Agriculture Department whereas Fisheries policy is dealt with by the Fisheries Department. Each state in Australia has a slightly different system and coordination and communication between the systems was lacking until recently (see below).

## Emerging Diseases in or from Wildlife

Surveillance for disease in wildlife populations in Australia mostly has been incidental to surveillance in livestock, but there is a wide body of knowledge. There have been several large scale infectious disease outbreaks over the last 20 years, one of the better known being **kangaroo blindness** which occurred in 1994-1996. The syndrome was due to chorioretinitis caused by one or more orbiviruses (3, 11, 24). These viruses are spread by biting insects and had in fact been isolated in national arbovirus surveys before they were known to cause a disease in kangaroos. The incidence of kangaroo blindness is determined by the seasonal distribution of insect vectors and herd immunity (Category 5, Table 1).

The emergence of viral infections from reservoirs in populations of fruit bats leading to infection of domestic animals and then humans (Category 4, Table 1) has aroused more interest than any other emerging wildlife disease issue in recent years. It is noteworthy that bats are the only indigenous terrestrial mammals in New Zealand.

**Hendra virus** emerged in 1994 as a cause of severe respiratory disease in horses in a stable in Brisbane. It killed 14 horses and one of 2 humans who worked in very close contact with these horses. There was another fatal human case in 1995 in Central Queensland that derived from contact with a necropsy examination of an affected horse, and another fatal equine case in

north Queensland in 1999. The discovery of the cause of this disease and its source in flying foxes is one of the great stories of veterinary epidemiology (4). Hendra virus proved not to be highly contagious between horses or from horses to man, and the equine and human cases were rare events.

Knowledge that Hendra virus emerged from a reservoir in bats led to the rapid discovery of three other viruses in bats, because bats were now included in surveillance strategies of wildlife during epidemiological studies of emerging diseases of livestock and man (Table 3).

**Menangle virus**, reviewed in (15), proved to be relatively slowly contagious between pigs. It infected animals in a 3000-sow intensive farrow-finish piggery at Menangle in New South Wales in 1997, and two of 30 humans in close contact with these pigs became infected. The humans developed a severe febrile flu-like illness, seroconverted, then recovered. The clinical signs in pigs were restricted to reproductive failure characterised by low farrowing rates, litters with reduced numbers of live piglets, increased numbers of mummified and stillborn piglets, some of which were malformed, and returns to service due to early embryonic loss. Serological evidence suggested that Menangle virus spread slowly within the piggery following contact of pigs with excreta from bats in a nearby colony. By the time the reproductive failures were apparent most pigs were infected, and infection

Table 3. Viruses present in fruit bats in Australia that pose a risk to man and domestic animals. Nipah virus, reported only from Malaysia, is included for comparison

Virus	Classification	Known Reservoir Hosts	Clinical Signs in Animals	Signs in Man
Menangle virus (Australia only)	Paramyxoviridae: <i>Rubulavirus</i>	Fruit bats: megachiroptera <i>Pteropus poliocephalus</i> ; <i>P. alecto</i> ; <i>P. conspicillatus</i>	Pigs: reproductive failure	Severe flu-like illness
Nipah virus (Malaysia only)	Paramyxoviridae: <i>Henipavirus</i>	<i>P. vampirus</i> ; <i>P. hyomelanus</i>	Pigs: fever, respiratory and/or neurological disease, abortion, death.  Dogs, cats are susceptible	Fever, neurological disease, death
Hendra virus (Australia only)	Paramyxoviridae: <i>Henipavirus</i>	<i>P. alecto</i> ; <i>P. poliocephalus</i> ; <i>P. scapulatus</i> ; <i>P. conspicillatus</i>	Horse: severe respiratory infection, death	Severe respiratory infection and death, or encephalitis and death
Australian bat lyssavirus	Rhabdoviridae: <i>Lyssavirus</i>	Various fruit and insectivorous bats	Bats: neurological signs and death	Neurological signs and death



was then maintained in the piggery by susceptible young grower pigs that became infected when maternal antibody waned at about 12 weeks of age. Once the virus had become endemic on the farm gilts were infected and immune prior to mating so there were no longer any signs of the disease. Menangle virus was eradicated from the farm by the simple expedient of removal of the age groups of pigs with active infection to break the infection cycle. The virus does not persist in the environment and there is no carrier state. Further details are given in (16).

By way of contrast, in Malaysia, **Nipah virus** spread from pteropid bats to pigs and in this species was highly contagious, although the clinical syndrome was varied. Humans and other species including dogs and cats became infected through contact with pigs, with fatal consequences in 1999 (15). Nipah virus was responsible for the deaths of 105 people and is considered among the most serious of the zoonotic agents ([www.who.int/inf-fs/en/fact262.html](http://www.who.int/inf-fs/en/fact262.html)). Delay in recognition that human encephalitis cases were not due to Japanese encephalitis virus probably contributed to the delay in effective control.

Hendra, Menangle and Nipah viruses are all RNA viruses and subject to mutation, which may confer new properties of altered host specificity and transmissibility. However, the reason for co-emergence in domestic animals of three related viruses from endemic infection cycles in bats may be due more to environmental effects than to mutation. Environmental disturbances such as deforestation, urbanisation and agricultural pursuits such as orcharding alter habitat availability (food, roosting sites) for bats and may cause them to come into closer contact with domestic species, enabling cross infection and amplification of viral loads in domestic animals with which humans have close contact (Category 4, Table 1).

**Australian bat lyssavirus** was discovered as a result of a thorough investigation to exclude Hendra virus as a cause of encephalitis in a fruit bat (5). It is now known to be endemic in bat populations across a large part of Australia. The viruses in fruit and insectivorous bats are only slightly different. Australian bat lyssavirus was responsible for the death of a woman bitten by a fruit bat in 1996. There has been one other human case. Although distinguishable from classical serotype 1 rabies virus using nucleic acid sequencing and reaction with monoclonal antibodies, Australian bat lyssavirus is more closely related to classical rabies virus than any other lyssavirus (reviewed in (10)) and is clearly capable of causing the same disease in humans.

Australia is officially free of classical rabies virus but almost lost this status when Australian bat lyssavirus emerged from bats. Prior to the era of

monoclonal antibodies and nucleic acid sequencing, Australia would have joined the list of countries classified as infected with rabies. Modern technology and viral taxonomy has spared us. Fortunately in real terms Australian bat lyssavirus appears to be confined to bat hosts and can be managed by education of the human population. Veterinarians, wildlife carers and others who handle bats are now routinely vaccinated against classical rabies virus because it induces good cross protection against Australian bat lyssavirus.

Little is known of the ecology of these viral infections in bats. Australian bat lyssavirus causes clinical signs such as weakness and paralysis in bats. Infection may occur in young bats, with a long incubation period, and adults may be seropositive (reviewed in (10)). Seroprevalence studies of all four viral infections continue in bats.

## Emerging disease in farm animals

**Newcastle disease in chickens.** Avirulent forms of Newcastle disease virus (V4) have been present in Australia for many years. Specific mutations in the RNA genome of the endemic viruses are associated with virulence and account for the recent outbreaks of Newcastle disease in New South Wales (9, 14, 32) (Category 1, Table 1). Another significant disease of chickens, **Avian influenza** has occurred in Australia on several occasions through introduction of virulent virus with wild migratory birds (21, 30) (Category 2, Table 1).

**Ovine Johne's disease.** There are two distinct forms of Johne's disease in Australia, bovine and ovine. Bovine Johne's disease (BJD) was first diagnosed in 1925(20) and is considered endemic in parts of Victoria, New South Wales, South Australia and Tasmania especially in dairy cattle. BJD also occurs in goats, deer and camelids in Australia and is due almost exclusively to the C (cattle) strain of *Mycobacterium paratuberculosis*.

Ovine Johne's disease (OJD) is an emerging disease caused by the S (sheep) strain of *M. paratuberculosis*. It provides a contrast to the rapidly emerging diseases mentioned above. OJD was first detected in New South Wales in 1980 (27, 28) and was considered to be restricted in distribution to the central tablelands of New South Wales. However, by 2002 it had spread to other districts in southern New South Wales and there were about 1100 known affected flocks out of approximately 30,000 flocks in New South Wales (19). OJD occurs now in Victoria, Tasmania and South Australia, with regional spread due to animal movements. As at December 2002, there were 1270 infected flocks recognised nationally ([www.aahc.com.au/jd/](http://www.aahc.com.au/jd/)) with another five thousand under some degree of suspicion or surveillance. Modelling the rate of spread of OJD and projecting this back in time suggested that the disease was first

introduced to Australia in about 1955. This coincided with imports of live sheep from New Zealand in the 1950s (2, 29). Live sheep imports were prohibited from 1958 to 1974, when policy was again relaxed to permit importation of carpet wool sheep. The S strain of *M. paratuberculosis* is common in sheep in New Zealand. This circumstantial evidence suggests that OJD in Australia is an example of a Category 2 emerging disease (Table 1).

The incubation period of OJD is usually about 2 to 3 years or longer. Time to onset of the clinical syndrome is reduced as contamination builds on a farm due to increasing prevalence, leading to higher infection rates and reduced incubation periods (35). Clinical "emergence" following introduction of a few infected sheep can require several generations of sheep with amplification of the problem from one generation to the next. Many years may elapse between first introduction of the infection into a district and the first obvious signs of disease, which are weight loss and mortality in adult sheep (35). The pattern of OJD on farms in New South Wales has been that at first the mortalities in adult sheep are rare and go unnoticed by farmers, or are explained as being due to other causes. It is not until they reached about 2% to 5% per annum that a veterinary investigation is requested and the true cause identified. Mortality rates of 10% per annum of adult sheep are not uncommon when the infection is endemic on a farm. These factors help explain the delay in detection of OJD.

OJD provides a lesson in detection and control of a slowly emerging disease. About 25 years elapsed between likely time of introduction and first diagnosis, despite the existence of a public-benefit passive surveillance system in New South Wales and another 15 years before a control program was planned. The National Ovine Johne's Disease Control and Evaluation Program (NOJDP) began in 1998 with the aims of determining the extent of the problem and conducting research into the disease, and while this was being done, minimising further spread. The program is due to be completed in 2004 and there is currently a process underway to determine how OJD should be managed in the future. Community support for ongoing regulatory control of infection in infected regions is low. The rural media report regional public condemnation of the program and animal health authorities. The primary reason for this is the lack of financial compensation for farmers whose flocks have been detected with the disease, and the few options available to them for a return to a trading enterprise. Human resource shortages in disease surveillance, research and program operations were also a problem. However, the NOJDP has led to an expansion in knowledge about the behaviour of the disease, the relationship between BJD and OJD, environmental persistence of the causative organism, the difficulty of eradication by destocking if

neighbouring farms are infected and the difficulty of applying diagnostic tests effectively. Furthermore, a commercial vaccine developed in Spain was registered for use in Australia by the National Registration Authority for Agricultural and Veterinary Chemicals following favourable outcomes in a large trial conducted under the NOJDP. This vaccine is likely to become an important control measure in infected regions and its use may lead to development of trading options for affected flocks.

### Other sources of emerging disease

There are many endemic disease agents in Australia that cause disease rarely, but then in outbreak form. This is usually due to a change in the interaction between host, pathogen and environment. Anthrax is an example (31) (Category 7, Table 1).

Infectious disease agents may be introduced deliberately, for example as agents for biological control of vertebrate pests (Category 8, Table 1). A CSIRO research trial with rabbit calicivirus ended prematurely in 1995 when the virus escaped from a field site on Wardang Island and spread rapidly on mainland Australia causing a spectacular epizootic (25). Landholders were reported to have assisted the spread of the virus on the mainland by translocating rabbit carcasses. It has proven to be an effective agent for rabbit control especially in the drier regions of Australia. In 1997 the virus was illegally introduced into New Zealand from Australia by New Zealand landholders (26). Research in Australia using genetically engineered viruses may lead to release of infectious immunocontraceptive agents for biological control of rabbits, mice and foxes ([www.pestanimal.crc.org.au](http://www.pestanimal.crc.org.au)).

Introduction of infectious agents through bioterrorism is relevant today and veterinarians should be aware that 80% of the microbiological pathogens considered risks for bioterrorism by the Centres for Disease Control in the USA are animal infections ([www.bt.cdc.gov/Agent/agentlist.asp](http://www.bt.cdc.gov/Agent/agentlist.asp)). There are two issues of concern with bioterrorism: acts directed against the human population using diseases such as anthrax, and; agricultural bioterrorism to destabilise the economy or local food production. The Federation of American Scientists listed six risk factors for agricultural bioterrorism in 2002 ([www.fas.org/bwc/agr/risk.htm](http://www.fas.org/bwc/agr/risk.htm)), and Australia and New Zealand arguably now have most of them: high density, large area agriculture; heavy reliance on monoculture, or restricted range of genotypes; free of serious pathogens and pests (therefore no immunity); major agricultural exporter; domestic unrest or threat of international terrorism; weak plant and animal epidemiological infrastructure. There are numerous disease agents that could be used to devastate animal production and plant-based agriculture. Some of these agents are easy to obtain, propagate, transport, conceal and deliver to animals.

Early detection is the most potent weapon against emerging diseases in general and bioterrorism in particular. A delay in detecting the recent foot and mouth disease (FMD) outbreak in the United Kingdom is a critical factor in that outbreak propagating as it did. More than 50 farms were already infected by the time of diagnosis (1). Inadequate veterinary services were another factor in this epizootic. The economic impact of a deliberate introduction of FMD in Australia would be up to A\$13B in the first year in lost exports alone. Gross domestic product would fall by 0.6% and employment by 0.8% (7).

### Australia's preparedness

Australia has dealt with emerging diseases in the past with great success. For example rinderpest occurred in Western Australia in 1923 on 28 farms near Fremantle. It was quickly detected and eradicated swiftly. Australia had another success with classical swine fever eradication in 1942-43. There are other examples of successful stamping out of exotic disease in farm animals and birds. How well placed is Australia to deal with this kind of threat today? Australia has an extremely detailed plan (AUSVET-PLAN) to deal with outbreaks in a systematic and coordinated manner, with specific strategies for each significant disease. There have been successful simulations, such as the recent operation Minotaur to identify gaps in preparedness. The Australian Animal Health Laboratory at Geelong is well-resourced and world class and exists to diagnose exotic diseases. Short courses in exotic disease recognition are run for veterinarians at this laboratory. However, debate continues about other kinds of resources:

- \* *Veterinarians based in the field, communicating regularly with farmers.* It is well accepted that the veterinary profession in rural Australia is ageing, and in remote areas and small towns is not being replaced. Salaries here are lower, stresses higher, hours of work longer, and educational opportunities less than in larger cities. The same issues apply to rural teaching and human medicine. There is concern about the adequacy of trained and experienced people in Australia to trace animal movements, impose quarantine and maintain surveillance in a major disease outbreak. These factors have been accepted in a major review of rural veterinary services (6). There was a recommendation to establish a veterinary reserve to help in surveillance and emergency response. It was also seen as a means of increasing rural practice income, providing a demand signal for rural veterinarians. However, the means by which a veterinary reserve could maintain a sustained response to a multifocal outbreak is unclear.
- \* *Local animal health laboratories familiar with local problems, staffed by specialists who communicate*

*with private and government field veterinarians and filter the routine from the potentially important and chronicle their findings.* Many of these laboratories have been closed or privatised over recent years, and remaining laboratories now impose a user-pays policy, with subsidies for particular kinds of investigations. The private laboratories inevitably seek profitable high volume clinical pathology testing, mostly for companion animals. Governments have defended these rationalisations of veterinary services, claiming that much of the activity of the past was not effective surveillance (6). However, many of the remaining specialist veterinary pathologists speak of repetitious and routine service of a few key diagnostic programs, and absence of effective passive surveillance. The truth may be somewhere between these views, but we have less idea in 2003 about prevalence of endemic disease in farmed livestock than we had in 1983. This may have serious implications for early identification of emerging diseases. There is also a succession problem in the specialties with knowledge of the livestock industries, fisheries, wildlife, disease investigation and disease control. Only 10% of relevant discipline specialists in Australia are under 35 years of age, with the average age being 49 years (6).

- \* *Farmer support for reporting and controlling animal disease in some areas.* Community support seems to have been eroded in recent years because of laboratory test charges, problems with implementation of the OJD program in NSW and Victoria and mistrust of government and authorities generally. Unfortunately in some areas farmers claim they are unlikely to contact veterinarians about disease events.

### New initiatives in Australia to address emerging diseases

There are a number of new initiatives in Australia to tackle emerging diseases in aquatic animals, wildlife and farm animals specifically, and to assist biosecurity.

- \* *Federal Government Aquatic Animal Health Unit.* An Aquatic Animal Health unit was set up in the Office of the Australian Chief Veterinary Officer in Canberra in 1998. Staffed by trained and experienced professionals, it leads a process of coordination of effort in fish disease prevention, diagnosis and emergency response. There are now national committees with representation from each of the key industries and State Government departments and a positive environment in which to plan for the future. An emergency response plan (AQUAVET-PLAN) has been completed, and is endorsed by government and industry. Plans are

now being developed to address the shortage of aquatic animal health clinicians and pathologists. Control of EHNV and any future emerging diseases of aquatic animals will be advanced by this new approach to aquatic animal health in Australia.

- \* **Australian Biosecurity Cooperative Research Centre (AB:CRCC).** This is a cooperative entity formed between industry, universities, CSIRO and the Federal Government with total financial commitments of about A\$67M. It will commence business in July 2003 and has a life of 7 years. The principle aim is "to protect Australia's health, livestock, wildlife and economic resources by developing new capabilities to monitor, assess, predict and respond to emerging infectious disease threats which impact on national and regional biosecurity". The CRC has three core program areas: research, education and linkage. The research program will address technologies to enhance detection (biosensors), wildlife reservoirs and emerging diseases (Hendra virus, Nipah virus, Japanese encephalitis, dengue) and advanced surveillance systems. The education and training program will link to the Veterinary Public Health Management Program (below) and train 45 PhD students. There will also be short courses and regional conferences. The linkage program will ensure technology transfer and intellectual property management.
- \* **University of Sydney on-line post graduate education in Veterinary Public Health Management.** Meat & Livestock Australia identified a need for additional veterinary epidemiological expertise in Australia, co-funded a Chair of Farm Animal Health at The University of Sydney in 2002 and took the initiative to co-fund the development of a new program in Veterinary Public Health Management in the Faculty of Veterinary Science. Additional funding was then obtained from the Vincent Fairfax Family Trust and The University of Sydney. The course is offered at Certificate, Diploma and Masters levels in an articulated format over 1 to 2 years. It seeks to facilitate career enhancement for graduates with interests in the livestock sector. Electives are offered in aquatic animal and wildlife epidemiology. There are 18 students from a range of government and private sector backgrounds enrolled in the first year of the program. The course is offered via the internet, with on-line discussion between students and course facilitators who are industry experts selected from around the world. There are two residential weeks each year to enable students to work in groups face-to-face. A unique feature of the program is emphasis on self awareness, leadership training, teamwork, policy development and project management. These skills were identified during market research with

potential students and employer groups as being of increasing importance in the practice of veterinary public health. Traditional units of study in epidemiology make up the balance of the program.

- \* **The Australian Wildlife Health Network.** This network was established in 2001 to coordinate wildlife disease surveillance, emergency disease preparedness and disease information from across Australia. It is funded by Agriculture, Fisheries and Forestry Australia under the Australian Wildlife Exotic Disease Preparedness Program. The network is hosted by the Zoological Parks Board of NSW and NSW Agriculture and supported by numerous government and private sector agencies. A full time coordinator is based at Taronga zoo in Sydney. The objectives of the network are:
  - o Establish and coordinate a network of wildlife health expertise and resources
  - o Develop and operate a national database of wildlife health information
  - o Identify wildlife health surveillance and research needs and priorities
  - o Promote the development of regional and national wildlife health emergency preparedness and response strategies
  - o Facilitate and monitor field investigations of disease incidents
  - o Advance education and training in wildlife health
  - o Provide information about wildlife health to the community and
  - o Seek and secure resources to achieve the objectives listed above

#### Additional needs to address emerging diseases

A recent government review concluded that *"Australia's animal health needs are being met on a day to day basis but Australia's animal health system will need to be enhanced to meet more stringent requirements for international trade in the future"* (8). In practice Governments will need to decide how secure the agricultural sector should be in our economy and our society, and the degree to which they wish to underpin human health by effective surveillance for zoonotic disease at its source in animals. Governments need to provide some level of insurance against emerging animal diseases, including potential bioterrorism as it is a collective community requirement of minor interest to the private business sector. The key ingredient in this insurance is an animal health network supported by taxpayers. There are many models but perhaps those applicable in Australia would include:

- In addition to the establishment of a veterinary reserve, provision of government contracts for animal disease surveillance to veterinarians in private practice in rural areas, to increase the financial viability of their enterprise, improve the lifestyle by enabling employment of additional staff and facilitate a generational change in rural veterinary practice.
- Enhancement of fee-free laboratory testing for specified surveillance for animal disease, which will also stimulate demand for specialist training, combined with greater epidemiological input to ensure more meaningful regional passive surveillance, capture and analysis of data than may have occurred in the past.
- Investment in training of veterinarians for deployment to rural areas. This might take the form of bonded scholarships and revised entrance criteria to veterinary degrees.
- Investment in training of specialists in veterinary pathology, infectious disease, food safety and epidemiology, the key disciplines for emerging disease detection, confirmation and control.
- University veterinary faculties will need to find sponsors in government, industry and the farm animal sector to ensure that facilities for training are brought up to date. Little money has been available for renewal of facilities for decades at the older veterinary schools. At Sydney at least \$35M is required to renew farm animal teaching and research facilities at Camden, most of which date to the 1950's, just to meet current Australian standards.
- Development of stronger links between agencies such as university veterinary schools, state agriculture, fisheries and wildlife departments, and CSIRO to ensure more efficient utilisation of existing personnel and infrastructure, all of which is taxpayer funded.

The farming community needs to engage more in this issue and understand the developing international situation and the risks of ignoring it. This might be the signal governments need to address pressing resource issues.

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## The Veterinary Profession In The Falkland Islands\*

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### Historical Review

The first full time vet arrived in the Falklands in 1977. Prior to this there had been occasional visiting vets who were employed by the British Antarctic Survey (BAS) to look after the dog teams used for pulling sleighs in the Antarctic. Their route to and from Antarctica took them through the Falkland Islands and they would often stop off on their way south or north for a few weeks to carry out some routine veterinary procedures. From 1977 the following vets have worked in the Falkland Islands:

- 1977-83 Steve Whitley (employed by ODA and worked for the Grasslands Trials Unit [GTU] later renamed the Agricultural Research Centre [ARC]). The position was mainly involved in agricultural and veterinary research but clinical work was also carried out for which a charge was made. All money received was paid into a fund which went towards purchasing veterinary drugs and equipment. Unfortunately Steve's wife Susan was one of only three civilians killed in the 1982 Falklands conflict.
- 1984-86 Neil Pullan (also employed by ODA as part of the ARC. Mainly involved in research on sheep parasitology). Subsequently replaced by an ODA funded parasitologist.
- 1984-87 Dennis Lampard. Dennis was the first government vet in the Falkland Islands paid for entirely by the Falkland Islands Government (FIG). The position involved mainly clinical and regulatory work.
- 1987 Jo Woods. Temporary fill-in for six month period.
- 1987-91 Peter Armitage
- 1991-93 Michael Reichel
- 1993-95 John Saunders

1995-98 Andrew Coe (Senior Veterinary Officer)

1996-98 Caroline Lamb (Veterinary Officer). In 1996 the veterinary section had two full time government paid vets for the first time.

1998-2001 Cameron Bell (Veterinary Officer)

At various times from 1990 onwards locums have been employed to cover for annual leave periods. These have included Jonathon Spencer, Bob Jackman, John Wellington and Cameron Bell. Most of the vets have originated from the UK but since the introduction of a second veterinary officer it has become an unofficial policy to have one vet from the UK and the other from either Australia or New Zealand. This has been deemed to be beneficial in that it widens the range of expertise in various areas and has allowed Australian and New Zealand solutions to be applied to veterinary and farming problems in the Falkland Islands. Generally speaking farming in the Falklands is more akin to that in Australia than in the UK.

### Current Compliment

The current compliment of vets in the Falkland Islands is 2 full time vets and a third vet who is present for the export killing season from January through till the end of May. The veterinary structure is as follows:

Senior Veterinary Officer	Stephen Pointing (1998 - now)
Veterinary Officer	Kevin Lawrence (2001 - now)
Official Veterinary Officer (abattoir)	Manuel Sancho (Jan - Jun 2003)

All vets are employed by the Falkland Islands Government and form a part of the FIG Department of Agriculture. The Senior Veterinary Officer answers to the Director of Agriculture but is himself responsible for the following positions:

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Veterinary Officer  
OVS  
Meat Inspector  
Senior Laboratory Technician  
Veterinary Services Officer  
(admin. and nursing care)  
Hydatids Officer

The veterinary section of the Dept of Agriculture works closely with other members of the Department in a multi-disciplinary team that includes posts such as a beef advisor, ruminant nutritionist, agronomists and a sheep/wool advisor.

### Veterinary Activities

The veterinary section has a wide remit and covers many different aspects of work within the Falkland Islands. The following areas are all covered by the Veterinary section:

- Clinical work - both companion animal and farm animal medicine and surgery.
- Supervisory role at an EU approved export abattoir.
- The approved Competent Authority for the inspection of Falkland Islands registered fishing vessels leading to the subsequent issuing of health certificates to accompany the products back to the EU.
- Animal welfare issues.
- Monitoring the health of the Islands' livestock and implementing surveillance testing for diseases such as TB, B. bovis and B. ovis.
- Issuing import permits for live animals, animal products and genetic material and ensuring that any such products are only allowed to enter the Falkland Islands if they meet the specified protocol (work closely with the Customs Dept.)
- Setting up of import protocols with the recognised state bodies in other countries.
- Supervising the export of animal products (mainly, fish, wool and meat) to other countries and ensuring that the products comply with the requirements of the destination countries.

- Extension work with farmers - this involves regular visits to farms and also writing for the monthly agricultural journal, the Wool Press. The vets usually attend farm and departmental open days and regularly broadcast on the local radio. During the annual "Farmer's Week" there is always a session devoted to veterinary matters.
- Attending annual OIE General Session in Paris as part of UK delegation.
- Liaising with Falklands Conservation over a wide range of wildlife animal health issues.
- Assisting with the introduction of novel livestock species such as reindeer and guanaco.
- Participate in the development of the aquaculture industry especially in relation to supervising that standards meet those required by the EU for the import of shellfish and other farmed aquatic species.

### Current Fee Structure

All veterinarians in the Falkland Islands are employed by the Falkland Islands Government (FIG) and paid directly by it. Charges are made for all clinical services provided but the revenue made from charges does not have to cover staff salaries. The two vets work a one week on/ one week off duty rota to cover for evening and weekend emergencies. In effect the FIG is subsidising both small and large animal clinical work. Over the past few years an attempt has been made to raise prices to a more realistic level and this process will continue into future years. Below you can see the

	Falkland Islands	United Kingdom	Australia	New Zealand
SA Consultation	£ 6.00	£ 14.06	£ 16.73	£ 9.30
LA Consultation	£ 6.00	Not listed	£ 23.26	£ 13.00
Bitch Spey	£ 35.00	£ 108.51	£ 74.00	£ 58.00
Dog Castration	£ 25.00	Not listed	£ 43.50	£ 34.50
Cat Spey	£ 20.00	£ 35.00	£ 38.00	£ 25.50
Cat Castration	£ 11.00	Not listed	£ 25.80	Not listed
Routine Puppy Vaccinations	£ 25.00	£ 37.50	£ 17.75	£ 12.00
Routine Kitten Vaccinations	£ 10.00	£ 29.77	£ 13.50	£ 10.60
Horse Castration	£ 72.50	£ 131.00	£ 84.60	£ 45.50



prices currently charged in the Falkland Islands for a variety of procedures and alongside them are the average fees charged in three developed countries where all veterinary services are provided by the private sector.

### Continuing Professional Development (CPD)

Geographically the Falkland Islands are very isolated and this poses a problem when it comes to CPD and trying to keep abreast of new developments in the veterinary field. Access to the internet has made a tremendous difference to the amount of veterinary information that is readily available. On top of this the veterinary section subscribes to the professional journals of the UK, Australian and NZ veterinary associations. Being part of the Department of Agriculture we also have access to a wide range of agricultural literature covering most of the areas of interest to Falkland Islands agriculture. CPD is encouraged within the Department and veterinary staff are asked to seek out suitable courses to coincide with their annual leave. Attendance at CPD meetings is paid for by the Department. In the past year the SVO has attended the OIE General Session in Paris as an observer, an "Equine Emergencies" conference organised by BEVA in Newmarket and the UK/Mediterranean regional meeting of the CVA in Cyprus. The VO has spent short periods of time at a guanaco farm in W Wales and a reindeer farm in Scotland (both species are present on the Falklands and their future in FI farming has yet to be decided). This year the VO will attend the BSAVA conference in Birmingham and the Veterinary Epidemiology and Preventative medicine annual conference in Warwick, both in the UK. The SVO will be attending the NZVA/CVA conference in Wellington, NZ in June 2003.

Our relationship with professional and governmental organisations in the UK, Australia, New Zealand and Chile are excellent and there is regular e-mail and telephone communications between all parties concerned. These are continually being reinforced.

### The future for the Veterinary Profession in the Falkland Islands

The Education system in the Falkland Islands is very well funded with students being schooled to the age of 16 in Stanley and then sent overseas (usually to the UK) to complete their secondary education. The cost of education right through to degree level is completely met by the Falkland Islands Government. At present there are two qualified FI vets. Zoe Luxton qualified from the

RVC in London in July 2001 and has subsequently worked in mainly small animal practice in Ipswich, UK. She plans to work overseas for another 2 or 3 years to gain further experience and would like to work for a period in either Australia or New Zealand. Diana Miller has recently qualified from the vet school in Sydney, Australia.

She is currently living in South Australia and is about to take up a post with the South Australian state veterinary department. She, too, would like to return to the Falkland Islands to work in the future but realises that she needs to acquire more practical and administrative skills before coming back.

The current compliment of 2 full time and one part time (abattoir) veterinarians is just about right for the current workload although difficulties can arise during busy times of the year or when one of the vets is away on leave or sick.

### Familial retinal degeneration in Irish setters

When they were between six and 11 years old, four Irish setters were diagnosed with bilateral retinal degeneration and cataracts; in three of them, progressive signs of night blindness had been observed when they were between eight and 11 years old, but in the others no signs of visual impairment had been noticed. By using an allele-specific PCR, the rod-cone dysplasia type 1 (rcd 1) mutation was excluded as a cause. A familial relationship was detected in three of the four dogs, and these three were also related to four other Irish setters with histories and clinical signs suggestive of late-onset progressive retinal degeneration. These relationships suggest that in the Irish setter breed there may be a hereditary late-onset progressive retinal atrophy which is distinct from rcd 1.

DJAJADININGRAT-LAANEN, S.C., BOEVE, M.H., STADES, F.C. AND VAN OOST, B.A. (2003). Familial non-rcd 1 generalised retinal degeneration in Irish setters. *Journal of Small Animal Practice*, 44: 113-116.

"Intellectuals are people who believe that ideas are of more importance than values. That is to say, their own ideas and other people's values"

Gerald Brenan (1897-1987)

**CALENDAR OF EVENTS****2003**

15<sup>th</sup> Veterinary Association Malaysia Congress and Livestock Asia 2003, Kuala Lumpur, Malaysia. August 20<sup>th</sup> - 23<sup>rd</sup>.

24<sup>th</sup> Annual AAV Conference and Expo, Pittsburgh, Pennsylvania, USA. August 25<sup>th</sup> - 29<sup>th</sup>.

BVA Congress 2003, Sheraton Grand Hotel, Edinburgh, England. September 25<sup>th</sup> - 28<sup>th</sup>.

5<sup>th</sup> International Symposium on the Epidemiology and Control of Foodborne Pathogens in Pork, Creta Maris Hotel, Hersonissos, Heraklion, Crete, Greece. October 1<sup>st</sup> - 4<sup>th</sup>.

32<sup>nd</sup> Annual Conference of the Parasitological Society of Southern Africa 2003, Farm Inn, Pretoria, South Africa. October 7<sup>th</sup> - 10<sup>th</sup>.

28<sup>th</sup> World Congress of the WSAVA, Bangkok, Thailand. October 24<sup>th</sup> - 27<sup>th</sup>.

CVA Regional Meeting of West African Region, Banjul, The Gambia. (Date and Venue to be announced)

**2004**

CVA Regional Meeting of ECS African Region, Lusaka, Zambia. (Date and Venue to be announced)

CVA Regional Meeting of Australasia/Oceania Region, Papua New Guinea. (Date and Venue to be announced)

8<sup>th</sup> International Conference on Goats, Pretoria, South Africa. July 4<sup>th</sup> - 9<sup>th</sup>.

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