AUSTRALIAN VETERINARY HISTORY RECORD

NOVEMBER 2003 — NUMBER 38

The Australian Veterinary History Record is published by

the Australian Veterinary History Society in the months of

March, July and November.

Please take the opportunity to visit the AVHS web page
<www.vetsci.usyd.edu.au/avhs>

Editor: Dr. I.M. Parsonson, 2/1 Coape Street, Cheltenham, Victoria 3192

…….

Office bearers of the Society:

President: Dr. J.T. Faragher

Secretary/Treasurer: Dr. J.H. Auty
3/400 Latrobe Street,
Melbourne, Vic. 3000
Phone 03 9328 5214

Librarian: Dr. R. Roe

Committee Members:

Dr. Keith Hughes
Dr. Paul Canfield
Dr. John Fisher

The Australian Veterinary History Society is a Special Interest Group of the Australian Veterinary Association. All who are interested in any aspect of veterinary history may join. Annual subscription is $15. Enquiries to the President, Dr. Trevor Faragher, 28 Parlington Street, Canterbury, Victoria 3126, Australia. Tel/Fax 61 3 9882 6412. email<faragher@netspace.net.au>

ISSN 1445-579X

CONTENTS

ARTICLES

Annual Meeting of the AVHS, Canberra, May 2004

Call for Papers

The Australian Veterinary History Society agreed at the annual general meeting in Cairns in May 2003, that the next meeting is to be during the AVA National Conference, 2-7 May 2004, in Canberra. Later this year, the AVA will send a preliminary conference brochure to members.

AVHS will arrange a programme of papers about our veterinary heritage to begin the AVA Conference on Monday 3 May in Canberra. We intend arranging a convivial dinner for members and their friends. All members of the AVA will be welcome to participate in this programme.

Members of the AVHS are invited to present a paper to this meeting. Contributions on any aspect of veterinary history, particularly those relating to the theme of the conference, "The Art of Veterinary Science" will be most welcome. Please send an abstract of your intended paper to help with arrangements for the programme. Abstracts should not exceed 150 words including the title, author's name and address.

Please send your abstract with your name, postal and email addresses,
Telephone and fax numbers to Trevor Faragher, preferably by email
faragher@netspace.net.au or by fax to 03 9882 6412,
28 Parlington Street, Canterbury 3126, telephone 03 9882 6412

THE ESTABLISHMENT OF THE AUSTRALIAN ANIMAL HEALTH LABORATORY: A SYNOPSIS.

W.A. Snowdon

Australia has been fortunate in being free of the major animal diseases that affect animals in most overseas countries. Even though there have been introductions of exotic diseases from time to timed, these were usually eradicated rapidly as in the case of Newcastle disease of poultry in the 1930s, but taking over a hundred years in the cattle disease of contagious bovine pleuropneumonia.

During the Second World War it was recognised by the veterinary authorities that Australia was vulnerable to the introduction of animal diseases. This was because of the movements of troops and materials to and from the islands to the north of Australia and the introduction of foodstuffs, such as pig meat, to feed the American troops based in Australia. Furthermore, in the case of an exotic disease such as foot-and-mouth disease (FMD) Australia depended upon the UK for advice and any assistance that would be required. During the war, when the UK was completely committed in Europe, Australia was very vulnerable, and even though it recognised the risks from the possible entry of exotic diseases, it wasn't really in a position to do much, except rely on its own resources.

Post World War 2, Australia developed significant export markets for its livestock products which were very much dependent on its freedom from FMD because the major importing countries were free of this disease. At the same time thousands of immigrants were arriving from Europe, where FMD was endemic. They challenged the quarantine barriers with their innovative attempts to illegally introduce their traditional foods that they believed would not be available in Australia. There were also political changes taking place close to home. In South East Asia, Indonesia gained independence from the Netherlands eventually taking control of West New Guinea. Further afield there was the war in Vietnam. These factors, coupled with the increased air travel following the introduction of jet aircraft in the 1960s, led the veterinary authorities in Australia to examine closely their preparedness to effectively handle outbreaks of exotic disease.

With the wider use of antibiotics post war it became possible to grow animal cells in culture and use them to cultivate viruses. This led to the development of the Salk poliomyelitis vaccine and other significant advances in human medicine. At the same time rapid advances were being made in the investigation of veterinary virus diseases

in Australia, although, until 1958, when CSIRO established the first veterinary virology research unit, Australia had little expertise in studying virus diseases of farm animals. The early success of the CSIRO Virology Section demonstrated that Australia was capable of doing much more to look after its own interests, and so be less dependent on overseas countries for exotic disease diagnosis.

In the early 1960s the Australian Veterinary Association established an exotic diseases committee that concluded that Australia would have to do much more if it was to be in a position to rapidly diagnose and control any exotic disease outbreaks. It recommended to the Australian Government that Australia should have a central laboratory, staffed with experienced scientists, who would be competent to do this work.

Following the urging of CSIRO, Division of Animal Health, an overseas expert was brought to Australia in 1964 to examine the preparedness of the veterinary services to control and eradicate FMD or any of the other diseases with which it might be confused. The subsequent report (Eichorn/McIntosh Report) recommended that Australia should have its own central maximum security laboratory for the diagnosis of FMD and other vesicular diseases. It was ironic that the Chief of the Division of Animal Health, who was instrumental in having an overseas expert carry out the review, had previously opposed the concept of a central exotic disease laboratory. The Director of Veterinary Hygiene, who had responsibility for animal quarantine, and who co-authored the report recommending the laboratory, also had previously opposed the concept.

Following the completion of the Eichorn/McIntosh report the Department of Health took upon itself the task of developing the proposal without consulting with other interested parties. Both the CSIRO and the Commonwealth States Veterinary Committee (CSVC) sought information from the Department of Health on its plans but were rebuffed. This resulted in the CSVC forming its own working party to examine the proposal for the laboratory and Department of Health forming a Commonwealth Interdepartmental Committee (IDC) to undertake a similar task. Because of the reluctance of the Director of Veterinary Hygiene (DVH) to advise the CSVC on the discussions being held by the IDC, a conflict occurred between him and other members of CSVC. Subsequently, after obtaining the views of "overseas experts", the DVH recommended that Australia shouldn't build a laboratory to handle exotic animal diseases. However with the involvement of CSVC, Standing Committee on Agriculture and the Australian Agricultural Council (ASAC), the initiative for the project was wrested away from the Department of Health. The Director Veterinary Hygiene on losing the initiative then did his best to prevent it going ahead. Eventually

the AAC decided that the laboratory should be built as a matter of urgency, determined its functions, and recommended that it should be managed and operated by CSIRO.

It is one thing to decide that Australia should have a high security laboratory that could handle highly infectious exotic diseases such as FMD, but it is another matter to build such a facility that could operate continuously without putting animal populations at risk. Hence it was necessary to determine whether the establishment and operation of such a facility were, in fact, feasible. This had to be of high priority because of the negative views previously expressed by "overseas experts." As a result a Proposal Evaluation Team (PET) was formed and its purpose was to visit overseas high security facilities and have wide ranging discussions with people who had designed, built and operated them, and subsequently make detailed evaluations of the available elements that contributed to security. PET concluded that it was feasible to construct and operate a high security facility in Australia that could safely carry out the functions for which it had been prescribed.

The Plum Island Animal Disease Centre in the USA was sited on an island because it was assessed that even though its security systems were state of the art for the mid 1950s, when the laboratory was built, some highly infectious viruses might escape from the facility. However the island location would prevent them reaching the mainland and infecting animals. Other countries located their facilities on the mainland. PET determined the requirements for a site for AAHL and after searching for a suitable location and considering security, political, engineering and operational factors, the Rifle Range Site at Geelong was selected.

It was always going to be problematical whether a Federal Government, no matter of what political persuasion, would agree to construct AAHL and commit to the very high capital cost and the large annual recurrent expenditure that would be required for operation and maintenance. In 1972, it was even difficult getting agreement between the relevant Commonwealth Departments on the format and composition of a Cabinet submission, requiring in the vicinity of forty drafts before the final submission was agreed upon.

The first decision by the Liberal Government that was in office in 1972 was to agree in principle to the establishment of AAHL. Following further development of the proposal a second submission was made to the Labor Government elected in1973 and it subsequently agreed to build AAHL. It appeared that the construction of AAHL would go ahead, but no one had factored in the sacking of the Labor Government by the Governor General in 1975. The Liberal Coalition Government, on returning too

power, rearranged its priorities and deferred construction. The project was in limbo. However in late 1977 the Government decided to precede with construction a decision that was aided by the discovery of bluetongue virus in Australia.

The successful construction, and commissioning of AAHL, and setting it to work were significant engineering achievements. The development of innovative design solutions, which often involved extensive prototyping and testing, and the quality of workmanship were exceptional. Furthermore the close collaboration between the Commonwealth Department of Works (CDW) and the client, (CSIRO) was an excellent example of what could be achieved with collaboration, culminating in the official opening of the facility in April 1985 The project fired the imagination of everyone involved, and the very few problems encountered when setting the laboratory to work, were an endorsement of the processes that were put in place to build the facility.

The operation of AAHL on a daily basis is the responsibility of CSIRO whereas a board of management is responsible for overall policy decisions. It was a large task to make AAHL operational. Besides obtaining the required staff and equipment it was necessary to establish programs to provide administrative and engineering services, develop microbiological security procedures, and establish scientific programs and prioritise research. The AAHL Security Assessment Group was established. It initially assessed AAHL's microbiological and physical security, recommended when it could manipulate exotic organisms, and subsequently monitored AAHL's security on a continuing basis. There was also a need to obtain exotic viruses from overseas to enable AAHL to fulfil its functions. This required consultation with the Commodity Councils of the National Farmers Federation, which often had disparate views, and scientists, whose views were often as divergent as those of the Commodity Councils.

Her Majesty Queen Elizabeth II said at the opening of the Sydney Opera House: "Every great imaginative project is tempered by the fire of controversy." AAHL was no exception.
Public controversy was triggered in 1981, and continued at varying levels of intensity, reaching almost hysterical levels after an accidental spill of Newcastle disease virus in 1987. It involved mainly scientists and members of the farming community either as individuals or as organizations. In fact, it often appeared that anyone, no matter whether they had an understanding of the issues involved or not, was asked for or volunteered an opinion. At the bottom of the controversy was a decision to handle FMD virus in the laboratory before an outbreak of the disease occurred in Australia. It was argued that advances in biotechnology had made the requirements for live virus

redundant, and hence, the risks of handling the virus in AAHL could be avoided. However some of those who were opposing the introduction of FMD virus had a much broader agenda. They opposed the concept of AAHL on the basis that it would reduce the amount of funding for science in general, and universities in particular. The controversy resulted in a number of reviews of the functions of AAHL, some sought by and endorsed by the Commonwealth Government and others initiated by organizations. The media coverage of this aspect of the project highlighted the strong views of the proponents, with extravagant statement being made that occasionally verged on being libellous.

Since becoming operational, AAHL scientists have made significant contributions in developing diagnostic tests for FMD that do not require live virus, and more specific and rapid tests for the diagnosis of diseases such as Bluetongue, Newcastle disease and Avian Influenza. It has played a key role in the identification of three bat viruses that were isolated in Australia: Hendra virus, Menangle virus and bat lyssavirus. It has run programs to train Australian veterinarians in the recognition of exotic diseases, supported the disease control authorities in the diagnosis and control of suspected outbreaks of exotic disease and acts as a Reference Laboratory for a number of exotic diseases.

A RELUCTANT CHOOK VET

Paul Gilchrist

Since withdrawing to my rural idyll and having given up most veterinary activities I have been able to concentrate on personal activities such as writing my life story for the grandchildren. While writing the veterinary component I received an Email from Kevin Whithear asking for material for the poultry magazine Dander. The writing was modified for the purpose and I hope this brief personal history may be of some interest.

Looking back to the days of selecting a future career, I was influenced by the desire to "better" myself. The ambitious opportunity suggested by my parents to go to University was one that gave me many choices. The only course I remember having been suggested to me was architecture. I really had no design abilities or interest in buildings of any sort and following a short period of thought on architecture as a way to make a living gave it up in preference for activities with a rural aspect. Influenced no doubt by holidays spent on farms owned by family friends. If it had seemed to be a possibility I would have been a farmer but had to accept the advice of my parents that they could not, and would never be able to, afford to buy a farm. Retirement has given me that opportunity and with a better concept of business I now know enough to realise that farming is not a way to make money.

UNIVERSITY 1947-51

During my final year at school in 1946, and just after the end of World War II, I applied for a Department of Agriculture "traineeship" in agriculture or veterinary science. The application was to be accompanied by an essay on the subject of "Peaceful Uses of Atomic Energy". What a hell of a topic for a 16 year old boy? In those days public servants had a very high regard of themselves and their potential to influence world affairs.

I did not get the traineeship that year but my parents said they could support me for one year in veterinary science and then I could reapply for the traineeship. I agreed and started first year Veterinary Science. Most of the students were ex-servicemen while I was one of the few schoolboys and in 1951 completed the course. After graduation, I got the menial jobs in the Agriculture Department as my boss regarded me as too young looking to be released on farmers who would never believe I was a vet. So I was kept in head office to answer veterinary enquiries on the telephone.

HEAD OFFICE 1951-54

It was in the Head Office job that I became interested in poultry diseases. At first reluctantly due to my lack of interest as a student in lectures on poultry diseases

delivered by Tom Hungerford in final year plus a week of "extra mural" work with Bill Nosworthy of the Evans and Nosworthy poultry practice. I remembered almost nothing of the lectures and was repelled by the practical elements of poultry practice. This meant that I had to keep the textbook on my desk, alongside the telephone.

Most of the enquiries were about backyard chickens as the practitioners were concerned with commercial poultry and my position was the only source of veterinary advice on the subject of backyard chooks. The most common chook questions were about warts or scabs, on the chicken's head and comb in late summer and autumn when mosquitoes carry fowl poxvirus. Vaccine for prevention came in a minimum size of 500 doses while these people had about 5 or 10 birds. A teaspoonful of boracic acid in a cup of warm water was recommended to be applied to the scabs twice daily for a week to prevent the scabs hardening across the nostrils or sealing the eyelids together causing blindness and starvation.

The second most common question was about snotty noses. Mycoplasmas were unknown and a dose of sulphonamide drugs was recommended – half a tablet a day for 3 days, with a break of 2 days and then another course of 3 days. Penicillin was the only commonly available antibiotic and it was not effective against most of the bacteria as well as being an expensive novelty not to be wasted on chickens.

Other common telephone diagnoses included vent gleet, bumble foot, sour crop, egg bound, water belly, wasting, and something called "the pip". This was a concretion of feed on the end of the beak apparently resulting from the feeding of wet mash. Similar concretions of soil occurred on the tips of the toes in hens kept in semi-intensive systems with plenty of access to muddy ground. These old English terms for conditions were still in common use.

After a while in the job I was appointed as THE Veterinary Quarantine Officer for the Port of Sydney. In those days there was only one. There were two Port Inspectors who called on my help when live animals were involved. The animals were mostly ship's pets that were unwanted or illegal. I also inspected small animals being exported from Australia, signed export certificates and killed cats found on ships coming into the Port of Sydney. The method of killing a cat was unsophisticated but effective. The cat was put in a hessian sac, restrained in the bottom of the sac by placing a foot on the sac to hold it still and then injecting sodium cyanide into its thorax via a 13-gauge needle. It was very effective and was rapidly fatal as the cyanide entered the lungs.

The cyanide was kept in a multi-sided brown bottle (the symbol for poisons) with a thick cork that had to be prised out, using the point of the hypodermic needle, when it was to be used. The big needle was then inserted into the liquid and an appropriate amount drawn up into a syringe. The cork was replaced immediately as the contents were very toxic. I once tried to hasten the procedure by pushing the needle through the cork so I could extract the chemical without allowing any of it to escape into the air I was breathing. The cork was hard to penetrate and was pushed through the neck

of the bottle squirting the liquid contents up into my face. Fear of poisoning balanced itself with fear of further harm and I carefully put the bottle down as I held my breath till I could turn on a tap, fortunately located nearby, and dashed copious water onto my face and into my eyes. I suffered a fearful headache for the rest of the day but no other harm followed. A lesson was learned and no such risks were ever taken again but on my recommendation and insistence we changed to the less dramatic, but more expensive, barbiturates for the job.

One of the things I had to do was write health certificates for animals being exported. This included day-old chicks going to Pacific Islands and Singapore as well as reptiles going to overseas zoos. The certificate said that the animal had been examined and no signs of disease found. Chicks were driven up to the front door of the old Department office in Farrer Place, in the middle of the Sydney Central Business District. Hundreds of day old chicks were fairly easy to give this undertaking for but at that time pullorum disease was widespread so the exporter had to have a certificate from a veterinarian detailing pullorum test results.

Snakes were presented in a cloth bag with a tape tie at the top. Inspecting poisonous snakes consisted of opening the ties at the top of the bag and peering in from a distance of some 60 cm and declaring it OK.

Racehorses were also inspected, especially for export to NZ. For these I sometimes went into the street to inspect a horse in a float but usually this was done at the stables at Randwick. On one occasion I inspected a horse and on return to the office the livestock agent was waiting at the office to pick up the certificates. He asked, "How was the champion?" I did not understand what he meant so answered"They are all horses to me." Later enquiries of my boss revealed that the horse had won the Melbourne Cup the previous weekend but I was not a follower of the sport.

There was an Animal Quarantine Station at Abbotsford on the shores of the harbour. My quarantine duties involved inspections of the few dogs allowed to be imported, from NZ. Importation of birds had stopped in 1947 so I had no exposure to this field of avian medicine.

WAGGA 1954-59

After a few years in head office I was apparently considered less youthful looking, so I was sent to Wagga Agricultural College as a lecturer in Nutrition, Genetics and Elementary Veterinary Science. In addition I was responsible for the health of the college livestock including, horses, pigs, beef and dairy cattle, sheep and some layer hens and turkeys. The local veterinarians referred all poultry enquiries to the college veterinarian as my predecessors in the job had encouraged this interest.

I also had to relieve the local Stock Inspector (now called Veterinary Inspector) when he was on leave.

The time answering poultry enquiries in head office came in handy and I was eager to

become the local chook expert. The college chooks included White Leghorn breeder hens that had pullorum disease. Testing them annually was a terrible chore and resulted in a slipped disk while bending 800 times in a day to wash the blood-collecting loop in a bucket of water. Later the bucket was put on the table to avoid stooping, but by then had spent three months on my back recovering from the injury. Eradicating pullorum disease from the semi-intensively housed breeders was difficult until I convinced the authorities that we should test the backyard flocks owned by the College staff. The man in charge of the chickens lived 30 metres away and walked to work each day after feeding his own hens. His hens were shown to be highly infected. One strange event was the time I was forbidden to conduct rectal examinations on the stud beef cows as their top expert disagreed with my pregnancy diagnoses. One of those I had diagnosed as pregnant was diagnosed as barren. I requisitioned it for a necropsy demonstration for my students and was delighted to find, and report officially that it was pregnant.

PENRITH 1960-61

After completing my contracted period with the Department I resigned to get back closer to Sydney and got a job with Tom Hungerford at Penrith. The job was advertised as involving mixed practice but poultry work "may be permitted for a suitable applicant". It took me two years to find my way out of 5 days a week vaccinating, medicating and blood testing chooks.

Penicillin was rarely used for poultry but chlortetracycline and oxytetracycline were used in the feed. Much of the use was as a "booster", whatever that meant. streptomycin was also available and it became popular as an intramuscular injection for treatment of coryza or combined with tylosin as a treatment for coryza and Mycoplasmosis. Layer hens in cages were of course in multi-age farms and had outbreaks of coryza annually, usually at the commencement of lay. The dose was worked out on the basis of "enough to cause 5% of the birds to faint". It was pretty frightening to go back down a row of layer cages and see all the birds squatting and a proportion of them unconscious. They recovered in a short time but it was scary at first.

Another remedy at that time was carbon tetrachloride for roundworm infestation. This chemical was also used at that time as a dry cleaning agent so the smell was familiar as that associated with clothes back from the cleaner. A drenching gun with a special curved long thin nozzle was used to administer it straight into the crop. Sudden death occurred if the nozzle went into the trachea by mistake. With a little practice this was rare, but when it did the bird was dead before it hit the ground.

The scariest thing that happened to me was a case of cholera apparently following the use of contaminated vaccine. The laryngotracheitis vaccine used then was prepared by collecting the tracheal mucus from young White Leghorn cockerels three days after

infecting them intra-tracheally with the previous batch of vaccine. It was commonly called a vent vaccine as it was administered intra-cloacally by dipping a special applicator in the vaccine, inserting it into the cloaca and rubbing it against the dorsal surface of the cavity. The special implement was actually a pin vice holding a piece of 2 mm wire with a few grooves filed into its tip to assist in abrading the mucosa.
One of the attractions of this method was that evidence that the vaccine had worked was shown by its effect on the surface of the cloaca that was bright cherry red on the third day after vaccination. I saw 3,000 hens out of 5,000 vaccinated die from Pasteurella multocida infection as a result of the contaminated vaccine. The survivors stopped laying, were very sick and had to slaughtered.

PULLORUM TESTING

Vaccinating, injecting and worming were bad enough but blood testing for pullorum disease was the worst veterinary job I have ever done.
Breeder hens were only layer strains then as meat strains were just being developed overseas. Breeders were housed in semi-intensive houses or in, what has now become called, barn-style houses.
The birds in a pen or shed were rounded up in a corner with folding wire screens about 1.2 m high. We had a group of, usually four, delinquent teenagers to catch and hold the hens. The veterinarian-operator sat on a low stool. Each hen was placed on the operator's lap for bleeding.
A curved three-sided suture needle set into a handle made from a cork was used to pierce the brachial vein. The up-welling blood was collected on a nichrome wire loop. We used a small copper oven, set on a low table, to heat the slides on which blood and antigen were mixed. Birds were bled in groups of 10 and were hung by the legs on a row of W-frames. By the time the last bird was bled it was time to read the first in the batch. Negative birds were released onto the floor and positives were first identified by plucking feathers from the back of the head or by having their tail feathers clipped.
On completion of a pen any positives were collected, retested under more strict time and temperature conditions and if confirmed were isolated to be disposed of by the farmer.
On a well organised farm it was possible to test 1500 to 1800 hens a day. This was in the days when a low level of positives on an annual test was permitted, so positives were not uncommon. Once some breeders became pullorum free the pressure was on for all to meet the same standard. Antigens were improved over the years and less false reactions occurred at later times.
How lucky I was that Beri Sinkovic was leaving Glenfield Veterinary Research Station to become a lecturer in poultry disease at Sydney University. I applied for the job and having developed some expertise in poultry diseases decided to commit myself to this rare veterinary field.

GLENFIELD 1962

In poultry practice I had done many necropsies and learned much about the industry and its problems. Sending specimens to the laboratory was almost unheard of.

My main job was to diagnose poultry diseases. Farmers brought specimens to the laboratory without any referral by a veterinarian. Necropsies were done and the farmer advised of the cause and control measures. Advisory leaflets were prepared to hand to the farmer and for distribution to various Department of Agriculture offices for issue to enquirers. I still wish medical people would use a leaflet system to advise patients of the basic elements of their diagnoses and therapies.

Respiratory diseases were the most difficult diagnostic challenge. Most of these types of diseases were known collectively as "roup". At Glenfield the known diseases had been sorted out as laryngotracheitis, coryza of rapid onset, coryza of slow onset and a mild disease described by Len Hart a few years earlier as a transmissible condition he called "mucoid tracheitis".

Laryngotracheitis was a clearly recognisable condition and Australia was famous for this problem. Other countries considered themselves free. A form of laryngo associated with a severe panophthalmitis was seen in young chickens and subsequently appeared in other countries. In Indonesia many years later it was seen when the government had not recognized its presence. Laboratory diagnosis was confirmed by infecting susceptible 6 week old White Leghorn cockerels by intra-tracheal instillation of tracheal mucus from suspects. If haemorrhagic tracheitis did not develop by the sixth day (usually seen on the third day) the specimen was negative.

Coryza of slow onset, ("snotty nose"), was probably Chronic Respiratory Disease (CRD) that had been described overseas. There was some work on pleuro-pneumonia-like organisms (PPLO) that were suspected as the cause of coryza of slow onset. The veterinary literature and Rob Cumming soon told us about *Mycoplasma* and *mycoplasmosis.*

Mucoid tracheitis became a focus of my investigations, as it seemed to fit many of the field conditions. I was especially interested in a mild "snick" that occurred in 10 day old chicks on multi-age farms with birds reared in battery brooders and attempted isolation of all the usual bacteria and included inoculation of chicken embryos. I was attempting to describe small embryos when Rob Cumming isolated infectious bronchitis virus from cases of kidney disease that had been called "uraemia" in the local industry. My small embryos later were recognised, as typical dwarf embryos and mucoid tracheitis became infectious bronchitis.

Diagnosis of *Mycoplasma gallisepticum* was later possible with antigen imported from overseas and the organism was isolated on special media. It was some years later, before M. synoviae was recognised as the cause of a similar respiratory disease.

Elanco Products Company approached me to do a comparison trial, with their new product tylosin, and erythromycin, and untreated controls. I obtained some young

chickens infected with *Mycoplasma gallisepticum* and did a simple body weight comparison trial. The results so impressed the company that they offered me the job of technical support to their marketing effort.

ELANCO 1963-68

I was the first veterinarian to be employed by Elanco in Australia. The job of technical support of the tylosin marketing program led me into fascinating contact with the poultry industry and allowed me to travel widely. The coccidiostat monensin was introduced later extending my poultry involvement.

A poultry diagnostic laboratory was established at West Ryde and later in the basement of the office at St. Leonards. The idea was to offer a free service to farmers and thus encourage their interest in the products.

The first three years of this job were almost exclusively poultry oriented but in the later years there was more emphasis on hormonal control of oestrus in sheep and cattle. I reaffirmed my commitment to poultry at this stage and established my own practice.

PRIVATE PRACTICE 1968-70

I rented premises at Merrylands, not too far away from a major client's hatchery. Later I was offered a new laboratory and office on the premises of TC Newman Pty Ltd with a deal that I did diagnostic and advisory work for their clients and they would market any recommended medications. It may sound like a pressurised situation but they never pushed any particular recommendations and I felt professionally free.

My biggest clients were two major breeding companies, Scientific Poultry Breeders (SPB) (and their affiliated companies) and Hyline Chicks (and their affiliated companies).

While in practice I set up a series of coccidiostat tests in which buquinolate and two other coccidiostats wer tested that have since disappeared. Buquinolate also disappeared but I remember it because of the spectacular speed with which resistance developed. The trials were carried out in colony cages with wire floors so that reinfestation was prevented. The results showed that it worked well against a variety of local isolates and it was introduced to the market. In a few cases it worked for the first batch but there was one case of a broiler farm in the Blue Mountains where it did not work in the first batch and 12% of the birds died with E. tenella infestation. It was soon withdrawn from the market and I tested an isolate from the disaster farm for resistance. It was strongly resistant.

It was while in this job that I saw a condition recently described by colleagues in meat breeders. It was a sudden death condition in mature breeders, lasting for only a few days. At postmortem examination there were miliary spots in an enlarged liver.

Bacteria were not isolated from the livers and though antibiotics seemed to work, so did the old remedy of "masterly inaction".

HYLINE CHICKS 1970-75

A major client (Hyline Chicks) decided to employ a veterinarian so I applied and worked with them for the next 5 years, after which George Weston Foods took over.
Marek's disease was a serious problem for breeders at that time because the acute form was widespread. At Hyline we tried to select for resistance but fortunately the arrival of the vaccine saved a full commitment to the program.
Eradication of *Mycoplasma gallisepticum* was also a priority at this time. A new property was purchased so that chicks from treated eggs could be held in isolation. We used tylosin dipping and heat treatment successfully. Unfortunately the geneticist introduced some birds that were infected and we had to do it all over again. The eradication appeared to have failed but the identification of *Mycoplasma synoviae* clarified the issue. This was the first isolation of the organism in Australia.

SPECIAL VETERINARY OFFICER (POULTRY HEALTH) 1975-80

The NSW Department of Agriculture needed some expertise in poultry health and I applied to return there for the third time.
Monitoring the disease status of the industry was at last considered important by the States and attempts at developing uniform legislation throughout Australia were being adopted.
I was involved in development of controls over chicken meat processing, poultry vaccine production, registration of poultry medicines, improvements in diagnostic procedures, exotic disease control and conditions for the importation of fertile eggs.
It was my most exciting time but things eventually became routine and I was offered an opportunity to apply for an administrative position with much better remuneration than I had as a specialist.

CHIEF, DIVISION OF ANIMAL PRODUCTION 1980-84

I regard the acceptance of this administrative position as my worst career move it removed me from the technical aspects of my career to became a manager of personnel. This made me responsible to senior administration and to Ministerial whims and I soon began to wish that I had stayed where life was comfortable.
I discovered a serious antipathy to veterinarians among the livestock advisory and research officers. It turned out that my deputy had applied for the job several times and been knocked back. When I arrived, as a blow-in, he resigned but gave 6 months notice and sat in the next office for the duration, probably glaring at my back through the wall.
There was one job I had in that time that suited my poultry interests. I was appointed

to conduct a Ministerial Enquiry into the Production and Marketing of Eggs in NSW. I had the support of some good economists in my work and finally recommended what was seen by the industry to be the death knell to the regulated industry. Some egg producers have still not forgiven me. The industry politicians subjected me to some serious vituperation. Personal attacks on my integrity were common. In fact I had recommended that the regulation of the industry be continued with the proviso that egg pricing be based on a search for efficiency of production. It was my view that deregulation would be too disruptive to the industry but that some of the benefits of the regulated system could be retained if the industry voluntarily removed the price floor system that had developed. They could not see that this was possible and the industry eventually became deregulated when the Greiner government bought the egg quotas of all existing producers effectively deregulating the industry.

I embarked on a program budgeting system for livestock activities in the Department. In this approach each project would be budgeted separately and adjustments within and between programs could be based on clear evidence of cost/benefit.

This idea threatened many people with vested interests and my enthusiasm eventually led to such dissatisfaction that I was moved sideways to a sinecure position Executive Assistant to the Director General, sometimes referred to as the Lego Room. I was responsible for a few things that kept me occupied until the age of 55 and could take retirement.

CONSULTANT VETERINARIAN 1985-Present

Trevor Bagust had the China Poultry Project going and I joined the team. It was a fascinating time and though the end result was frustrating because of the difficulties involved in many aid projects it opened up new opportunities. Clive Jackson was also part of the project and we combined forces in a Consultant Practice. We did a number of jobs in China and Indonesia as well as many in Australia.

I had 17 trips to China including, in addition to the Poultry Project, a series of livestock project evaluations for the World Bank. These involved visits to 20 of China's Provinces to visit applicants for funds to develop projects in various forms of livestock, including pigs, layer and meat chickens, ducks, geese, beef and dairy cattle, wool and meat rabbits and milking, meat and cashmere goats.

In Indonesia we were involved in poultry disease diagnostic programs at Bogor (Java) and in village chicken field trials in Lombok (Newcastle disease vaccination) and Bekasi, near Jakarta (improving husbandry).

In 1993 I left and withdrew to my farm bought soon after leaving the Department in 1985. Some consulting work continued to come and kept me quite busy for a while. In one year I had a gross income exceeding anything I had ever earned before. I had

bought the farm for a settled lifestyle but being away from home became a burden and I no longer sought work after 1996.

Now mostly retired with a small stud flock of Boer goats. Current consultant veterinarian jobs include one real poultry job, two committee jobs and as advisor to a large producer on importation of fertile eggs, export of products and development of health programs. The committees are an Animal Care and Ethics Committee with CSIRO and a Risk Analysis Panel (for uncooked chicken meat) with Biosecurity Australia.

Occasionally I am called for emergency assistance to neighbours' livestock. There have been a few challenges with these cases. I have not lost a dog with tick paralysis and have had varying success with beef cattle calvings, including a caesarean (the cow lived). Many of the cases require euthanasia due to advanced stage of the injury or disease by the time I am called or due to the farmer being unable to catch the affected beast.

My own goat flock is a hobby, as the market for stud Boer goats is oversupplied and is mostly located in the more remote parts of the state. The farm is about three hours drive from Sydney and three hours from Port Macquarie. We have children and grandchildren spread throughout that range so visits are simple. The roles of parent and grandparent are very satisfying and are demanding enough to replace an active veterinary career.

This paper was presented as part of the program at the Annual Meeting of the Australian Veterinary Historical Society in Adelaide on Monday 6 May 2002.

TWO ROYAL COMMISSIONS REVISITED

JOHN AUTY

In 1927 and 1928 two R oyal Commissions were held in Western Australia relating to the cattle industry in the Kimberley 's; an Inquiry into Alleged Killing and Burning of Bodies of Aborigines in East Kimberley, and into Police Methods When Effecting Arrests (hereafter RC1) , [1] and an Inquiry into the Meat Industry in Western Australia (hereafter RC2). [2]

In his report on RC1 Commissioner GT Wood stated "I have no hesitation in bracketing Murnane with the rest of the whites who did not scruple to lie to the Commission". In his Findings he wrote "(2) That in June 1926, four aborigines met their death and their bodies were burned near Gotegotemerrie, and that three aborigines met their death and their bodies were burned at Mowerie; that the aborigines at that time were in the custody of Police Constables Regan and St.Jack, assisted by Special Constables Patrick Bernard O'Leary and Richard John Jolly, accompanied by civilians Leopold Rupert Overheu and Daniel Murnane and trackers; that the aborigines met their death at the hands of one or more of those members of the police party, but there is not sufficient evidence before the Commission to establish definitely the actual perpetrator or perpetrators of the murders."

Daniel Murnane was born in Victoria and was just 18 years when he enlisted in the Australian Imperial Force in 1915. He served in Gallipoli and France rising to the rank of corporal. He had a fortunate war escaping injury and sickness and was discharged in 1919. He commenced studies in 1920 in Veterinary Science at Melbourne University and graduated in 1924. After a short period in practice he joined the Council of Scientific & Industrial Research (CSIR) as a Veterinary Research Officer and by January 1926 was in the Kimberley at Fitzroy Crossing, investigating Buffalo Flies. In June he was in Wyndham when a report was received of the murder of William Hay at Nulla Nulla Station at the foot of Cambridge Gulf. An investigating police party under PC Regan was formed for which Murnane volunteered and was accepted. His reasons for volunteering as given in his evidence at RC1 (Questions and Answer 2132) were, "Purely and simply my own free will. The man who had been killed by the natives was the first white man whom I met in Wyndham who made me thoroughly welcome, took me to his station for a period of four weeks, placed his

motor launch at the disposal of my department, as well as plant, horses and everything on the station, and I considered it would be only a very small return if, when he met his death, I endeavoured to catch the man who had killed him."
In his evidence to the Commission Murnane was a recalcitrant and aggressive witness. He kept no diary, suffered from uneven recall, failed to learn the names of places, and even the names of the trackers with whom he had been in the field for three weeks in dangerous circumstances, referring to them on one occasion as niggers. He was the only member of the party to use this expression about both his own collaborators and the bush aborigines. Mr. Wood questions Murnane closely on the size of the police party composed of six white and seven aborigines, 13 in all. Murnane thought it was necessary for the party to be this large otherwise (Q&A 2234), "one would not get a very comfortable night's sleep." There is no evidence that night watches were kept and the party separated into two groups demonstrating the absurdity of this remark. However he denied any cowardice, "as most of the party being returned soldiers." The relevance of this is unclear.

Murnane left the party before Mission and police trackers arrested the alleged killer Lumbia. He returned to Wyndham by dinghy where he received instructions from CSIR to proceed to Melbourne by the next coastal vessel. In his family history this adventure in pursuit of Aboriginal murders disappeared without trace being replaced with an imaginary journey by packhorse across the Kimberley to meet a coastal boat in order to journey to Melbourne to be married.[3]

Murnane was back in the Kimberley in April 1927 where at Derby he gave his evidence to the RC1 on the 25th April and was then located at Fitzroy Crossing using the local police resources and nearby cattle stations to carry out an investigation into Kimberley Horse Disease through observation of natural cases and by feeding trials on local horses. There is no evidence that he observed horses actually browsing whitewood. He concluded that the disease was caused by the ingestion of whitewood Atalaya hemiglauca.

For reasons that are not clear, many of the witnesses to RC2 were asked whether they agreed with Murnane's findings. The answers given the subsequent history of research into this disease are highly interesting and have lessons for all field research.
.Sir Alexander Cockburn Campbell Bart, drover, whilst agreeing that mortalities occurred where whitewood grew did not think it was the cause of the true walkabout (Q&A 226). James Moloney saw Murnane's animals in feeding trials and agreed they showed signs similar to the natural disease (Q&A 314-6).
Arthur Haly, Pastoral Manager for Wyndham Meat Works claimed that whilst

whitewood was common on Mulla Boola the only horses that died were those which had been off the station (Q&A 477).

David Oliver grazier did not agree with the finding; whitewood was everywhere but not walkabout (AQ&A 782-4).

GC Trenoweth grazier blamed a caustic bush, which he had seen, horses grazing (Q&A 1143).

W.J. Chalmers pastoralist stated that there was scarcely any whitewood on his property "yet our horses die" (Q&A 1524).

W. Flottman station manager, "In places where they do not see whitewood that horses die, generally at the beginning of the wet. It points to something in the wet, probably an early annual lplant." (Q&A 1551).

Arthur Blythe grazier stated whitewood caused illness in horses but they don't die of it (Q&A 1583).

H.J. Denham "I cannot agree with Murnane's finding. We have plenty of whitewood. Yet in a year like this we would not lose a horse." (Q&A 1652).

J.L Edgar had seen horses crop down whitewood without any ill effect. (Q&A 1699)

Replying to questions 1804, 1835 and 1863 three more graziers expressed their doubts about Murnane's findings.

Benjamin Copley Spring Pastoral Co. stated that although they had plenty of whitewood horses would only eat it if there were no other fodder (Q&A 2788).

W.E.C. McLarty part owner of several stations stated; "They (station managers) ridicule the idea. It is hard for a layman to pit his opinion against a scientific man who has made experiments, but one can only go on his own experiences. In districts where we have lost most horses, there is virtually no whitewood at all." (Q&A 3677).

Murnane returned to Melbourne to publish his results in CSIR Bulletin 36 where he also made recommendations how station management might avoid the disease. [4]. Since most cattlemen did not agree with his findings apparently nothing happened, and finance was not directed to pursue these recommendations, 30 years later few stations had more than horse and bullock paddocks. This was not Murnane's last activity with the disease. At some point it came to be suspected that the activity of the plant was not found in the leaves but in the fruit. During 1928-32 trials were carried out by Murnane in Melbourne using leaves; leaves plus a small amount of fruit; and fruit in larger doses. It was found that the leaves had no effect, leaves plus fruit killed in 179 days, high doses of fruit killed in three days. Murnane concluded "Although the fruit of the plant was found to be highly toxic to horses the experiment did not reveal what, if any, association there may be between the consumption of the plant and the occurrence of Kimberley horse disease." [5]

Although it would appear that Kimberley graziers should have been advised of these new findings the results did not surface until 1953 when they were published in the Australian Veterinary Journal.
The last word on the relationship between Atalaya and Kimberley Horse Disease came with the publication of the work of McConnell and Barnes in 1956. They concluded that because of the unpalatability of the fruits, Atalaya poisoning was not a significant cause of loss in the Kimberley horse disease area. [6]

Daniel Murnane was thrown into an environment in the Kimberley which despite his apparent maturity and experience it appears he was unable to handle. As a scientist he was alone, able to communicate with his peers only by telegram or a mail service with a turnaround of six weeks or longer. On his own evidence he turned to the ex-servicemen of Wyndham for companionship. The author knew that Hay, Overheu, and O'Leary had a somewhat checkered past. In his research Murnane failed to carry out adequate preliminary discussions with experienced locals who would have at least cast some doubt on the direction of his feeding trials.

Murnane was lucky that he was not involved in a trial for murder. The hunting nature of the cattle industry and the scepticism about his research findings ensured that his recommendations for prevention of whitewood poisoning were not followed

REFERENCES

1. Anon, 1927,Royal Commission Appointed to Enquire into the Alleged Killing and Burning of Bodies of Aborigines in East Kimberley, Perth, Government Printer.
2. Anon,1928,Royal Commission Appointed to Enquire into the Meat Industry in Western Australia, Perth., Government Printer.
3. Daniel Murnane,1973,Obituary, Aust.Vet.J., 49,p.105
4. Murnane D., 1928, Kimberley Horse Disease, CSIR Bulletin No.36, Melbourne, Government Printer.
5. Murnane D., 1953, The Toxicity of Atalay hemiglauca (Whitewood), Aust.Vet.J. 29 pp.188-190.
6. McConnell,JD.,Barnes, J.E.,1956, The Toxicity of the Fruits of Atalaya hemiglauca (Whitewood) for Horses, Aust.Vet.J. 32 pp.74-76.

Barry Laing Munday, 1932 - 2003

BVSc. (Hons) 1956, MVSc 1970, MACVSc 1971, DSc 1992

Tasmania, indeed Australia, lost one of its most distinguished Veterinary Scientists with the untimely passing, on Saturday 10 May, 2003, of Barry Laing Munday. Barry's immense contribution to literally every aspect of his profession belied his unassuming disposition. He enhanced all the many career pathways he encountered during a lifetime of amazing diversity and excellence. Sadly, we cannot hope to see his like again.

Barry Laing Munday was born in Hawthorn, Victoria, on 3 October, 1932. His family later moved to Hobart where Barry commenced his primary education at Princes Street School, occupying the desk immediately behind the author, who remembers the unfortunate class titters when that young lad had to stand up and recite his name on the first day of term – a Monday! Secondary education was at Hobart High School where Barry distinguished himself academically and at athletics. He was also editor of the school newspaper. During school holidays he did part-time work at one of the then two private Hobart veterinary practices where, no doubt, an interest in veterinary science was kindled.

At that time, virtually all Tasmanian students wishing to complete a Veterinary Science degree applied for a Tasmanian Department of Agriculture cadetship which provided the necessary funding for the five year course. Barry Munday was granted his government scholarship in 1951 and began his studies at the University of Tasmania. During the one-year preliminary basic science course there his obvious talent for taxonomic and microscopic work resulted in an approach by distinguished botanist, Dr. Winifred Curtis, for him to consider a career in Botany.

Nevertheless, Barry went on to study Veterinary Science at the University of Sydney, residing meanwhile at St. Andrews College. He graduated, with Honours, in November 1955. The State Government scholarship which sustained his undergraduate years also bonded Barry for an equivalent period to the Tasmanian Department of Agriculture. In those days the Veterinary Nationalisation Scheme operated which provided a free clinical and disease control service for rural livestock and pet owners. Tasmania was divided into Districts with one or two Government Veterinary Officers servicing each, supported by various lay Stock Inspectors. It was demanding work requiring largely untried graduate veterinarians to be literally "jacks of all trades", and on-call basically 24 hours a day. Barry Munday's first DVO location, at the commencement of 1956, was Launceston, with short periods at Deloraine and

Devonport. Later, in June of that year, he was transferred to Burnie where he remained until August, 1957. During his Launceston sojourn, Barry met and wooed his future wife, Miss Fay Gluskie, subsequently depriving the northern office of one of its most efficient 'girl Fridays'. They were married in September 1957 following which Barry, with his new wife, was transferred to King Island where they remained until December 1960.

While as the lone vet on King Island, Barry Munday developed and refined the skills in problem solving and prophylaxis which were to serve him and Tasmania well for the next 45 years. He produced clinical papers on a range of topics such as bovine obstetrical sequelae, equine surgery, Johne's Disease, and even snake bite in a cat. But it was Barry's collaborative investigations, with KD Skerman, AK (Sandy) Sutherland, and others, in conjunction with the Nicholas Institute, into micronutrient deficiencies on King Island, cobalt and copper in particular, which set him apart in the eyes of his interstate and international colleagues. His enhanced reputation also led to his inter-alii Departmental appointment as Veterinary Officer – Disease Control.

The intriguing and exacting fields of veterinary research and pathology were eventually to lure Barry Munday away from clinical activities. When a vacancy for a Veterinary Pathologist was advertised at Launceston's Mt. Pleasant Laboratories in December 1960 he grabbed it. Not that his 28 years there were divorced from the field. Barry's desire to investigate animal diseases on the spot led him to become, initially, a very practical problem solver, and later a research scientist of national and international prominence. Despite the unremitting pressures of coping with the exigencies of daily life at Mt. Pleasant Laboratories, Barry found time to advance the relevance of veterinary science in Tasmania like no other single person, before or since. His contributions, both practical and written, were considerable and wide-ranging, amounting, until then alone, to over 100 individual and collaborative published papers.

In 1968 Barry was awarded a Wool Research Trust Post Graduate scholarship to the University of Melbourne which enabled him to spend a year there furthering his detailed studies into the epidemiology of toxoplasmosis. His subsequent thesis resulted in him being granted the degree of Master of Veterinary Science in 1970. That same year he was promoted to Senior Veterinary Pathologist, and, in 1971 he was invited to become a foundation Member of the Australian College of Veterinary Scientists. Later research into Sarcocystis (23 papers), wildlife diseases, toxicology, and diseases of freshwater fish, to name but a few, further enhanced Barry's reputation. No challenge seemed too great. When it became necessary to post-mortem a 20 tonne sperm whale carcase on a Stanley beach, Barry performed the task with a chain saw,

which, the writer understood, afterwards had to be discarded into the pit with the remains of the dissected cetacean. Among other things from this operation, came an anatomical recommendation from Barry as to how, in future, stranded sperm whales might be reliably euthanased.

Almost inevitably, it seems, Barry Munday's pathological interests drew him increasingly towards wildlife and the enormous gap in the extant knowledge of their diseases and parasites. His pioneering work in this field, encouraged by the then Tasmanian Chief Veterinary Officer, Keith Meldrum, and his friend and mentor Dr Bill Hartley, plus Barry's intense lobbying throughout the nation, led to the formation, in July 1973, of the Australasian Section of the International Wildlife Disease Association (WDA) with Dr Barry Munday as its pro-tem Chairman. The inaugural scientific meeting and first annual general meeting of this Section was held, in association with the 46th ANZAAS Congress, at the ANU, Canberra, in January 1974. Since then the Association has gone from strength to strength, with well-attended Conferences every year – three to date, in Tasmania, with Barry as the principal organiser.

So prolific and relevant were Barry's scientific contributions and papers, that it is difficult to single out one topic of more importance than another. Collaboration, cooperation and encouragement were his watchwords. Often his activities involved the field of human disease, such as his role on the State Thyroid Advisory Committee from 1971 to 1979. Frequently, small beginnings had far-reaching significance. For example Barry's enthusiastic acceptance of the importance of the national., sentinel herd scheme led to the initial discovery, in the summer of 1975, of the presence of Ross River virus in Tasmania, some six years before the first human clinical cases were diagnosed. The extensive blood sampling of wildlife which he later organised provided the basis for elaborating the epidemiology of Ross River virus disease in Tasmania. His singular representation on the professional, medical-science body, the Tasmanian Haematology Immunology & Neoplasia Group (THING), coupled with his investigative work into the relevance of bracken fern by-products in the food-chain to human cancers, led to a veterinarian currently lecturing to undergraduate doctors at the University of Tasmania's School of Medicine, on the importance of zoonotic pathways in human illness. Barry was an Honorary Research Associate at the University of Tasmania's Medical School from 1982 until his death. By contrast, in cooperation with David Obendorf and Tim McManus, Barry's scientific approach to the many cetacean strandings that occur in Tasmania, was largely responsible for the emergence of the State's Whale Protection Act.

After the retirement of TM ('Massie') Alexander in 1978 Barry Munday was appointed to replace him as Chief Veterinary Pathologist at Mt. Pleasant Laboratories. He retained the position for ten years, in the process becoming father, mother, friend and mentor to the entire staff there. While, as a consequence, his scientific endeavour suffered, Barry, with assistance from his colleague, Veterinary Pathologist Roy Mason, still managed several significant achievements. The salmonid industry was emerging as an important contributor to Tasmania's economy. Barry established a fish pathology unit at Mt.Pleasant Laboratories to cope with its demands. He was a member of the Organizing Committee which convened the very successful 4th International Conference of the Wildlife Disease Association in Sydney, 25-28 August, 1981. In 1985, for his services to the WDA and wildlife disease research, Barry Munday received the Distinguished Service Award of the WDA at its 5th International Conference in Uppsala, Sweden. Tasmanian platypus were found to be dying from a peculiar ulcerative dermatisis. Barry initiated tedious field investigations which revealed the cause as a Mucor amphibiorum infection. This work is ongoing. In fact, Barry was still organising various research activities the day before he died. Not that he needed to ensure he would not be forgotten. He even has the doubtful honour of having several parasite species named after him.

Although unassuming by nature, Barry Munday was not a person to retreat from an argument if he knew he was right. A pertinent example of this occurred in relation to one of his many contributions to the sheep and wool industry, viz. His role in the volution of the White Suffolk. Barry was well aware of the publicity concerning the costs to wool spinners of even small numbers of contaminant black fibres. What began almost as a hobby on his little farm, "Serendip", created quite a controversy among traditionalist Suffolk stud owners, with Barry. eventually emerging as the winner and the new breed becoming officially recognised.

In March, 1988, Barry's career path underwent a dramatic change when he resigned from then Department of Primary Industry and Fisheries to accept a teaching position at the University of Tasmania's new School of Aquaculture on its northern campus. Here he met a kindred spirit in Professor Nigel Forteath, and, subsequently (1993), as 'Reader in Aquaculture', helped put Tasmania's new academic discipline firmly on the map. It was almost as if, at the age of 56, Barry developed a second scholastic 'wind', so active did he become in the piscatorial field. His permanent desire was to continue a research career rather than attain a senior administrative one where he would inevitably become 'desk-bound'.

One of his first achievements was to encourage the establishment of base parameters

in pristine tidal estuaries for comparison with ecosystems associated with industrial outflows. Investigations into and problem solving relating to diseases in commercial fish farms also kept Barry busy. His expertise was recognised internationally when he was invited to join the editorial board of the Journal if Fish Diseases. His intellectual contributions and capabilities had resulted in the establishment of research associations, both in Australia and in many overseas countries. Barry made numerous visits throughout Australia and to foreign destinations to cement this network. Many of his students whose studies and higher degrees he supervised now serve as research scientists and in senior government positions throughout the world. In 1992, the University of Melbourne awarded Barry Munday the degree of Doctor of Science – a rare honour for a veterinary scientists – in recognition for his immense contribution to academic knowledge. At that stage, his peers had lost count of the number of scientific papers which bore his name. Barry was also at the forefront in advising the Federal Government on the dangers of importing salmon from overseas.

While busy at the School of Aquaculture, links with terrestrial animals were maintained with membership on the University of Tasmania's Animal Ethics Committee. The platypus skin disease research also continued. And so on, towards the sad end, from cancer, of a truly distinguished career. A career which epitomised the assertion of the great veterinary parasitologist, the late Dr. Hugh Gordon, that a degree in Veterinary Science prepared its graduates like no other discipline, for the widest possible practical contribution to the scientific world. Barry's wife Fay, and their children, Philip, Louise and Paul, will of course be sorrowful at his passing, as indeed are his many friends and colleagues. Simultaneously though, even if it will no longer be possible to dial up our friend and mentor to be greeted by those familiar words 'Munday speaking', we can all rejoice in the memory and benefits of a wonderful academic and personal life lived to the full. A man who not only lived through a significant era of veterinary history, but made an enormous contribution to it.

Vale Barry Laing Munday .

Obituary compiled by Tim McManus – 15 June, 2003

NUMBERS OF HORSES
AND OTHER EQUINES USED IN WORLD WAR 1

1914-1918

Major General Sir John Moore, in his book of appreciation of the horses in the War, *Our Servant The Horse*, details the numbers of horses and other equines that were used in the fighting. (Moore, J., 1931 *Our Servant the Horse*, London, H & W Brown pp11-12)
The strength in horses of the original British Expeditionary Force that mobilised and went to France was 53,000. During the first twelve days of the War 165,000 horses were impressed. Between August 1914 and the middle of 1918 roughly 450,000 horses were bought in the United Kingdom. Over 700,000 horses and mules were bought in the United States and Canada on British account for various theatres of war.

At one period in France the British Expeditionary Force possessed roughly 475,000 animals of which 89,000 were mules. The total wastage from death, destruction and missing in that theatre amounted to approximately 250,000 up to the end of December 1918 and about 25,000 were sold to agriculturists prior to disposals on demobilisation. Roughly, therefore, during the four and half years, 750,000 animals took part in the war in France, in the British, Indian, Canadian, Australian, New Zealand and Portuguese armies.

The demands for Mesopotamia, and to a considerable extent for Egypt, were met from India and Australia, remount operations from those sources approximating 43,000 horses and 500 mules. East Africa was supplied from South Africa. At one period of the war, the strength of animals on all fronts totalled over 1,000,000 and the estimated number purchased throughout the war amounted to 1,361,000.

In August 1914, 193,319 horses were on the strength of the French Army, while eventually 799,661 were required. By November 1917, 1,188,539 animals had been purchased in America and Spain to supply wastage in the French Armies.
So great was the loss of horses in France that on demobilisation of the AIF a large number of Australian horses and mules were purchased by French people for use in agriculture.

On history as travel

In the autumn of 1793, Friedrich Nietzsche composed an essay in which he distinguished between collecting facts like an explorer or academic and using already well-known facts for the sake of inner, psychological enrichment. Unusually for a university professor, he denigrated the former activity and praised the latter. Entitling his essay ‘On the uses and disadvantages of history for life’, Nietzsche began with the extraordinary assertion that collecting facts in a quasi-scientific way was a sterile pursuit. The real challenge was to use facts to enhance 'life'. He quoted a sentence from Goethe: "I hate everything that merely instructs me without augmenting or directly invigorating my activity." ... Nietzsche suggested a second kind of tourism, whereby we may learn how our societies and identities have been formed by the past and so acquire a sense of continuity and belonging. ... and feel "the happiness of knowing that one is not wholly accidental and arbitrary but grown out of a past as its heir, flower and fruit, and that one's existence is thus excused and, indeed, justified".
Alain de Botton *Art of Travel.* 2002:112-113.

PLACE AND TIME OF NEXT MEETING:

The next meeting will coincide with the

AVA Annual Conference

in Canberra,

2 - 7 May 2004