AUSTRALIAN VETERINARY HISTORY RECORD

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ANNUAL MEETING 1999 - CALL FOR SPEAKERS

The Committee of the Australian Vaterinary History Society has decided that the annual presentation of papers and the AGM will be held in Canberra, early in May 1999. The exact date and venue have yet to be confirmed but it is anticipated that the meeting will be held on a Saturday afternoon, with a dinner in the evening and if needs be continue on the Sunday morning. This arrangement hopefully will give time for attendees to commute from Sydney, Melbourne and neighbouring tpwns.

The Society is now calling for speakers to present papers of veterinary historical interest at this meeting. Correspondence should be addressed to Dr Keith Baker, 65 Latimer Road, Bellevue Hill, NSW 2023; phone (02) 9327 3853.

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ANNUAL HISTORY SESSION AND GENERAL MEETING - 1998

The History Session was held on Monday 18 May 1998 starting at 8.30 am. Six papers were presented and well

received This session was followed by the Annual General Meeting.

MINUTES OF THE SEVENTH ANNUAL MEETING OF THE AUSTRALIAN VETERINARY HISTORY SOCIETY HELD IN SYDNEY ON MONDAY 18 MAY 1998 AT 4.35 PM

Present: R Taylor in the Chair and K Baker, V Cole, D Dowling, R Everett, J Fisher, D Johns, M Lindsay, Patricia Macwhiter, P Mylrea, R Roe.

Apologies: R Webb, I Parsonson

Minutes of the previous Annual General Meeting:
Confirmed on the motion of Drs Roe and Baker.

Business arising:
Nothing

President's report:

The Australian Veterinary History Society has had another productive year. This followed well attended History Sessions and AGM in Brisbane in 1997. We have continued to highlight the role of history in the development of the Australian veterinary profession. This Society has I feel stimulated research, publication and interest. Contact has been maintained with our Executive Ian Davis, Keith Baker and Dick Roe.

Dick Roe accepted the position of Hon. Librarian and he will report on the Max Henry Memorial Library which is now the Historical Collection managed by the Society. The Society has

also purchased and donated to the Collection a number of books of historic interest including John Stewart's *Advice to purchasers of horses*. This is a French edition and adds to the Library another book by this early and distinguished veterinarian. The Library also holds some of the AVA archives which have been processed by Doug Johns, The AVA Hon. Archivist.

We have now published 21 issues of the Australian Veterinary History Record. Congratulations to Peter Mylrea, who as Hon. Editor has produced the total output sine the publication was first issued. The Record is our main contact with members. The Executive and members thank Peter for his interest and editorial ability. Peter has also been the Hon. Secretary/Treasurer. His interest and energy has made my task as President much easier. Both Peter and myself feel that the time has come for a change of officer bearers and we will not be standing for election at the 1998 AGM.

To all associated with our history group thank you for your support and encouragement since the Society was established in 1991.

Dr R.I. Taylor, President.

Treasurer's report:

An audited financial statement is presented.

On the receipts side subscriptions were $860 much of which was for subscriptions for the year 1988 collected late in 1997. The AGM allocation ($2000) was the money from the AVA to cover meeting expenses. The two unusual items were receipts

from the sale of bound volumes of the Society's Newsletter ($490), and a payment to the Treasurer ($130) who used his own money to cover an accidental overdrawing on the Society's

Apart from the usual expenses of running the Society there were conference fees and travel ($1150), purchase of historical books for the Library ($352), a donation ($100) to Dr Angus, a member of the Society, towards the publication of her history *Tick Fever and the Cattle Tick in Australia* a copy of which in now in our Library, and a compulsory contribution ($300) towards AVA Policy Council. The cost for binding the volumes of the Newsletter was $750 compared with receipts from sales of $450. The difference is accounted for by donations to Libraries plus some spare copies still on hand.

The AVA deposits account stands at $4050 at 31/12/97 compared with $5009 at the beginning of the year The net difference was due to transfers to the working account.

Dr P.J.Mylrea Hon. Treasurer.

FINANCIAL STATEMENT 1 JANUARY 1997 TO 31 DECEMBER 1997

Receipts		Expenditure	
Subscriptions	860.00	Printing	419.00
Sale bound volumes	490.00	Stamps/postage	528.20
AGM allocation	2000.00	Stationery	111.90
Transfer from AVA ac	1750.00	Government charges	19.24
Postage recoup	12.00	Phoyocopying	24.31
Recoup to Treasurer	130.00	Purchase books/journal	352.47
		Book repair	75.00
		AGM Reg fees/travel	1155.00
		Newsletter binding	750.00
		AVA Policy Council	300.00
		Overdrawn charges	70.34
		Recoup Treasurer	130.00
		Donation/ tick book	100.00
	5242.00		4035.46
CR balance 1/1/97	302.47	CR balance 31/12/97	1509.01
	5544.47		5544.47

BANK RECONCILIATION

Bank statement		Cash book	
CR balance at 31/12/97	1509.01	Cash balance 1/1/97	302.47
O/S deposits	0	Add receipts	5242.00
O/S cheques	0		5544.47
		Less expenditure	4035.46
CR balance at 31/12/97	1509.01		1509.01

AVA DEPOSIT ACCOUNT

Receipts		Expenditure	
CR balance 1/1/97	5009.37	Transfer to AVA deposit acccount	1750.00
Interest	192.56		
Subs current year	480.00		
Subs in advance	90.00		
Further investments	29.00		
CR balance 31/12/97	4050.93		

PJ Mylrea Hon. Treasurer

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I, Roy Nicholson of 22 River Road Camden have examined the books and records of the Australian Veterinary History Society for the period 1 January 1997 to 31 December 1997 and have found them to be in order and correct.

RJ Nicholson J.P. 16 January 1998.

Librarian's report:

The Association's historical library collection of over 700 books dating back to 1804 is housed at AVA House, Canberra. During the year the catalogue was revised and checked against the collection. A small number of loan requests were received during the year.

Members wishing to enquire about the presence in the collection of material on a particular subject or wishing to borrow from the collection can contact Dick Roe (Hon. Librarian) direct by phone (02) 6272 5691, fax (02) 6272 3399, e-mail dick.roe@dpie.gov.au or through AVA House, 7 Phipps Place, Deakin ACT 2600.

Dr R. Roe, Hon. Librarian

Editors report:

Three issues of the Record were published during 1997 containing 52 pages. Articles ranged from reminiscences to thoroughly researched papers and even included one poem.

The Record is only as good as the articles submitted. The Editor would be delighted to receive contributions for publishing
in future issues. (It is very straight forward - there is no hassle with referees!)

Dr PJ Mylrea Hon. Editor

Election of officers:

The following officers were elected:

President: Dr K Baker
Secretary/Treasurer: Dr C. Bunn
Editor: Dr P Mylrea
Librarian: Dr R Roe
Committee: Drs Patricia Macwhiter, M Lindsay, R Taylor.

General business:

The following matters were discussed and referred to the Executive for follow up action:

1. The location of the Society's 1999 History Session and Annual General Meeting.

2. The development of an oral history program.

3. Advising retiring members of the profession about the Society with the aim of increasing membership.

The meeting closed at 5.05 pm.

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HISTORICAL ARTICLES

Australian quarantine: W.A.N. Robertson

[W.A.N. Robertson died in 1939. An acount of the man and his historical writings is given in AVHS Newsletter No. 17, November 1996 p.8]

In the early days of Australian settlement the importation of stock from other countries was an urgent necessity and they had to be obtained from when and where possible, and no question as to their health was allowed to stand in the way. Importations were made from England, South Africa, India, Java and other eastern countries. The factor that operated more than any other to prevent the introduction of disease was the length of the sea voyage even from Java, although it was not sufficient to prevent all diseases.

Tasmania would appear to be the first colony to introduce legislation to prevent the introduction of disease for in 1838 an Act was passed to prevent the introduction of sheep from the mainland which were suffering from catarrh.

It is believed that Queensland had some control over imported stock in 1889 but the records are hazy; in 1873 they did appoint a quarantine keeper at Indooroopilly but for what class of stock is not known.

In 1861 South Australia passed an Importation of Cattle Act and Tasmania an Act to prevent the introduction of contagious diseases of cattle and sheep. In 1865 West Australia passed similar legislation and N.S.W. in 1866 provided for the quarantine of overseas sheep, and in 1871 extended it to cattle. Victoria in 1872 after the outbreak of Foot and Mouth Disease passed the Stock Diseases Act.

It is evident that there was a mass of legislation in the different colonies dealing with the subject when transport became more rapid. Suffice it to say that by 1909 every colony had its own ideas as to the manner in which disease should be kept out and

many conflicting systems were in operation. In that year in anticipation of the Commonwealth Quarantine Act coming into operation a conference of all the Chief Inspectors of Stock, accompanied in some cases by veterinary advisers was held in Melbourne to draft a uniform code. Those present at the Conference were J.P. Orr (Deputy Chief Inspector od Stock {C.I.S.}) assisted by S. Dodd, F.R.C.V.S. (Q'land), J.D. Stewart, C.I.S., M.R.C.V.S. (N.S.W.), S.S. Cameron, M.R.C.V.S., Chief Veterinary Officer, (Victoria),R.J. Needham, C.I.S. (Sth Aust.), R.E. Weir M.R.C.V.S., C.I.S. (W. Aust), T.A. Tabert, C.I.S. (Tasmania).

How well this conference carried out its duties is shown by the fact that except in some minor matters little alteration was found necessary until 1922. With the proclamation of the Quarantine Act operating over the Commonwealth and a uniform code it was thought that a Commonwealth Officer was not necessary. Each Chief Officer in each State was appointed the Chief Quarantine Officer for Animals, acting under instructions from the Director of Quarantine and some of their staffs were appointed Quarantine Officers to carry out the regulations.

In 1922 a Conference of Chief Veterinary Officers of the States was arranged in Sydney and opportunity was taken while they were sitting to discuss some of the problems which had arisen in connection with the regulations. Those present on this occasion were: A.H. Cory, M.R.C.V.S (Q'land), S.T.D. Symons, M.R.C.V.S. (N.S.W.), W.A.N. Robertson, B.V.Sc. (Victoria), A.T. Philp, B.V.Sc. (Tasmania) and M. Henry, M.R.C.V.S. (assisting N.S.W.). A few amendments of the regulations were recommended but it was recognised that the time was near for a complete and careful revision. The

Rinderpest outbreak in 1923-4 drew attention and confirmed the necessity for revision and a conference was arranged of Chief Quarantine Officers and held in Melbourne in 1925. On this occasion those present were Dr J.H.L. Cumpston (Director of Quarantine), A.H. Cory (Q), M. Henry (N.S.W.), W.A.N. Robertson (Vic), C.A. Loxton (S.A.), F. Murray Jones (W.A.), T. Philp (Tas.). In view of the progress made in Veterinary Science it was possible to make a number of alterations in the regulations more in conformity with scientific discoveries.

For some time it had been felt by those administering the regulations that a Commonwealth Veterinarian was necessary to co-ordinate the work of the different States and in 1926 a Director of Veterinary Hygiene was appointed in the Department of Health. The first appointee was Dr. W.A.N. Robertson whose early duties included an inspection of all ports and quarantine stations and a co-ordination of the work and removal of local difficulties. The result of this appointment was the establishment of greater confidence as between the States and the removal of anomalies.

A further conference of Chief Quarantine Officers was held in Canberra in 1933, when a complete revision of all proclamations and regulations was made. An important decision of this conference was that for the future it would be necessary for all certificates accompanying importations to be given by Government Veterinarians. This policy was adopted by the Dept. and to this extent the policy embodied in the International Convention for the Campaign against Contagious Diseases of Animals, Issued by the League of Nations was adhered to.

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The health and hygiene revolution in the Australian meat export industry in the 1960s: Niall Browne, 'Savaun', PO Box 30, Binalong NSW 2584

[This paper was given at the AGM Canberra May 1996.]

Shipments of meat and meat products cannot be exported from Australia without Export Permits issued under Commonwealth law; and a permit is issued only when a shipment meets the conditions of entry laid down by the importing country. In the case of exports to the USA a requirement, that meat and meat products meet the standards specified by the US Federal Meat Inspection Act and Regulations, was imposed by that country.

On the other hand, meat produced exclusively for the domestic market comes under State law, and the standards imposed by State law in the 1960swere lower than those demanded by the USA. Consequently the revolution was restricted to establishments registered for export, and hence under Commonwealth inspection supervision

The US authorities made certain that their standards were being maintained on a continuing basis through regular visits to individual establishments by US reviewing veterinarians.

The US Regulations required that the slaughter of food animals and subsequent processing be carried out under direct veterinary supervision, to ensure the recognition and removal of pathological conditions in livestock slaughtered for human consumption. The Regulations also imposed strict conditions of hygiene on slaughtering and meat processing establishments and on processing procedures.

Hygiene Requirements

The Regulations specified standards of hygiene for: (1) work areas: (2) processing equipment; (3) work personnel; (4) dressing of carcases; (5) the daily cleanup.

(1) Work areas included rooms in which animals were stuck and bled, rooms in which carcase dressing chains were situated and boning rooms in which carcases were broken into cuts and packed for export.

In all these areas floors and walls had to be constructed of impervious material and free of cracks, walls smooth finished and floors provided with sufficient drainage inlets to prevent the build up of waste water. Floor/wall junctions to be rounded for ease of cleaning.

(2) Processing equipment in contact with edible product to be non-contaminating, which meant in effect, that the equipment be constructed in stainless steel

These two requirements alone entailed substantial reconstruction work on Australian export meat establishments.

(3) For work personnel clean outer clothing, changed on a daily basis, and appropriate head covering (e.g. washable caps or plastic safety helmets) were mandatory. This requirement meant that the establishment had to provide adequate laundry facilities or have access to a commercial laundry.

Shower facilities adjacent to change rooms, sufficient for the number of employees engaged in processing operations, were also a requirement.

During processing operations ready access for workers to pedal-operated hand washing facilities had to be provided, as well as 83° C water in sterilisers for sterilising knives and steels. Knife pouches had to be metal and demountable for washing.

(4) During dressing operations carcase contamination by dirt (from hides and wool), faeces and urine (from rectum and bladder), and ingesta (from paunches) had to be kept to a minimum. To this end the skin was removed by carefully rolling it outwards and downwards, the rectum and bladder (cattle) were freed from their attachments and tied off, and the oesophagus was tied off and freed from its attachments, using a stainless steel rod, to prevent it breaking during evisceration.

Where accidental contamination did occur in spite of these precautions, it had to be trimmed off rather than washed off, as washing only spread the contamination more widely.

All these types of contamination are essentially microbiological in nature. Meat is a good culture medium for the multiplication of microflora, which can be either spoilage organisms of various types, whose multiplication can reduce the shelf life of product, or pathogens of public health significance such as Salmonellla and toxic strains of E. coli. As both of these pathogens can be present in bowel contents (and Salmonella in the rumen), the prevention of carcase contamination by faeces and ingesta during processing operations is most important from the public health point of view.

To control contamination by and multiplication of spoilage organisms and pathogens in boning rooms these rooms are held at 10^0 C during the boning operation, and all boning personnel entering and leaving the room had to wash their hands at facilities placed near all entrances.

(5) All processing areas were required to be thoroughly cleaned each night to remove all traces of dirt, blood, fat, ingesta, faeces etc. The result of the clean-up had to pass a comphrensive inspection by inspection staff before the day's kill could begin. Rooms and equipment found not to be clean were tagged by the inspector, and only an inspector could remove the tag.

Stock yards also had to be paved and drained and hosed down daily.

Health Inspection

Health inspection was divided into ante-mortem (A.M.) and post-mortem (P.M.) inspection; each of which required appropriate facilities.

In ante-mortem inspection each pen of sheep to be slaughtered on the day was run into an empty pen past an inspector and then back again. In this way it was possible for the inspector to observe each side as well as front and rear of each animal. Any animal showing any abnormality was then segregated into a pen reserved for "suspects", and identified as such. Here it could be more closely examined by the works veterinarian. In the case of cattle the Suspect Pen was equipped with a crush to facilitate veterinary examination if necessary

Pens of animals which had passed the examination were identified as such by the inspector, by means of an official card attached to the pen.

Suspects were individually identified by means of an ear tag and slaughtered separately at the end of the day's kill; and the post-mortem inspection was supervised by the veterinarian directly.

For proper post-mortem inspection, which took place after evisceration, it was necessary to maintain correlation between the carcase and its viscera.

Sheep P.M. Inspection

Each carcase was eviscerated onto a moving viscera table into pairs of stainless steel pans - one for heart, lungs, liver and kidneys; the other for paunch and intestines. The table moved along at the same speed as the carcase chain, so that correlation could be maintained. Carcase and viscera were then inspected for pathological conditions and disposed of accordingly.

Carcase and viscera which required more detailed inspection for proper disposition were identified by "retain" tags and placed on a stationary rail and in pans for this purpose.

Condemned carcases and viscera were identified by an ink 'Condemned' stamp, and passed down 'condemned" chutes at the end of the viscera table. The chutes lead to a secured area, under inspection control, where condemned material was rendered unfit for human consumption by hogging or by denaturing with carbolic acid.

As the viscera pans returned underneath to the beginning of the table they were cleaned and sterilised automatically using cold and 83° C. water sprays.

For sheep, routine P.M. inspection of the viscera included palpation of the lungs, liver, heart and oesophagus; looking in particular for: Cysticercus ovis cysts in muscle tissue; Eichinococcus granulosus; cysts in liver, lungs kidneys, heart, spleen and peritoneum. Caseous Lymphadenitis (CLA) abscesses in lungs, liver, spleen, kidneys and their associated lymph nodes; liver for fluke and Cysticercus tenuicollis.

Carcase inspection included palpation of the prescapular, precrural, superficial inguinal, iliac and lumbar lymph nodes and the popliteal area, looking for CLA abscesses; and palpation of the carcase generally for Cysticercus ovis cysts.

Cattle P.M. Inspection

After sticking, bleeding and skinning the skinned head was removed and dehorned. Each head was then washed and the nasal and oral cavities flushed in a cabinet to confine the wash water, which was separately drained. The identity of the head with the carcase was maintained by a serial numbering system. Heads were hung on a mechanical conveyor (or rack) with the tongues dropped to facilitate inspection. Head inspection was completed prior to evisceration of the carcase and the head was held until final inspection of the carcase was completed.

The beef viscera table consisted of close-spaced stainless steel slats which moved at the same speed as the carcase chain. The eviscerate stood on the table and positioned the lungs, heart and kidneys on the table separately from the paunch and

intestines. Adjoining the table top was an alcove in which the eviserator was able to hose down and sterilise his apron and rubber boots as necessary. When the eviscerator left the table he left the boots in the alcove. Inspection of the viscera took place on the table; and carcase and viscera requiring a more detailed inspection could be run off to a stationary retain rail and pans. A condemned chute was also provided here.

After the carcase had passed the viscera table it was split into sides, and the two sides were then given a final inspection.

Routine inspection of the head included the following procedures: looking for ocular epitheliomas and actinomycosis of maxilla or mandible; palpation of the tongue for actinobacillosis or Cysticercus bovis cysts; incision of the masseter and internal pterygoid muscles for C. bovis; incision of the submaxillary, retropharyngeal and parotid lymph nodes for tuberculosis or actinobacillosis; and, in the case of the parotid, for metastatic lesions from ocular epitheliomas.

Routine inspection of viscera included: examining the oesophagus for C. bovis; opening the heart and making incisions on its inner surface for C. bovis; examining the lungs for tuberculosis and other lesions; incising the bronchial, mediastinal, portal and mesenteric lymph nodes for tuberculosis; incising the bile duct for fluke; examining the spleen and kidneys for tuberculosis.

Routine inspection of the split carcase included: examining serous surfaces for tuberculosis; examining cut muscle surfaces for C. bovis; incising prescapular, precrural, superficial inguinal and internal iliac lymph nodes for tuberculosis.

For each individual sheep or ox showing pathology' then, the final judgement - whether for full or partial condemnation, was based on the total findings in carcase, viscera and head.

Carcases and parts which had passed the inspection were identified by an official ink stamp bearing the legend "Australian Approved" and the registered number of the export establishment. When not in use the official stamps were kept in locked security in the inspector's office.

General Remarks

(1) Cattle and sheep were required to be rendered unconscious by a suitable stunning device prior to sticking (e.g. for cattle a captive bolt pistol, an electric stunner for sheep).
(2) Careful removal of lactating udders was required to avoid carcase contamination from this source; keeping the superficial inguinal lymph nodes intact.
(3) Inspected and passed carcases were washed with water sprays in a screened and separately drained areas.
(4) A dial type thermometer was required at hot water points for inspection staff to continuously monitor the sterilising temperature (83^0 C.). Saws, knives, steels, etc. used on uninspected carcases required sterilization between carcases.
(5) Hand washing facilities included liquid soap and paper towel dispensers and containers for used towels.

(6) Water used in edible processing areas had to be potable quality, and sampled for bacteriological testing regularly.
(7) The new requirements for meat and meat products imported into the USA were notified in the Federal Register during May 1963.

In July 1963 Dr G.E. Fewster, A.C.V.O. Department of Primary Industry, was sent to the USA. In company with Dr J.P. Wilson of the Australian Meat Board and with senior veterinarians of USDA he visited 20 meat packing plants in 9 States between July 26 and August 25. On his return to Australia he provided a comphrensive report to the Department and to the export meat industry, which covered the equipment and procedures in place in the USA for the production of clean, disease-free meat; much of which I have already detailed.

In this report Dr Fewster also noted (quote) "The majority of meat works at present registered in Australia for the treatment of meat for export would not comply with the US demands."

Also in 1963 Dr Pals of USDA visited works in Qld, NSW and Vic and subsequently assured Dr H.R.Tinney, the C.V.O., that he would give every assistance in adapting the Australian Meat Inspection System to the new requirements. Dr Fewster also had discussions with Dr Pals in Washington during his visit.

But even by 1970, USDA was not satisfied with inspection procedures and sanitary dressing of sheep carcases, and the importation of Australian mutton produced after May 15, 1970 was stopped. By late July 1970 USDA reviewing veterinarians began lifting the embargo on a plant-by-plant basis, and by May 1971 USDA was able to report that Australia was meeting stringent US requirements for sheep meat.

(8) On Australian export works, then, the veterinarian has a supervisory role in the production of clean meat. In relation to disease-free meat, he examines clinical cases at A.M. inspection and supervises the P.M. inspection of those he

allows to go to slaughter. Routine P.M. inspection and the disposition of carcases and edible offal showing pathology is mainly in the hands of qualified meat inspectors.

I worked as a veterinarian for the USDA inspection service for two years between 1958 and 1960, and there the veterinarian was closely involved in routine P.M. inspection. The inspectors monitored all correlated carcases and viscera on the chain, and directed any showing pathology to the retain rail and pans; maintaining correlation with numbered 'retain" tags. Diagnosis of each condition and final disposition was then the responsibility of the plant veterinarian. For each species the vet. kept a running tally of each disease condition he encountered. At the end of the day the totals for each disease were entered on a special form (one for each species). Copies of the forms were sent to the Washington office each day from every federally-inspected packing plant; and they would have provided useful information on the prevalence and geographical distribution of a variety of livestock diseases in the United States.

Finally, while a bacteriologist might understand some aspects of the problems involved in the production of clean, disease-free meat; a vet., in virtue of his training, should have a much clearer overall picture of these problems, which vindicates his historic place in the industry.

In conclusion, I wish to thank Dr Fewster for making available me his personal papers, which were a valuable source of information for this paper.

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