nary History Society. Editor
Camden NSW 2570.

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Annual Conference Australian Veterinary History Society

A reminder that the Annual Conference of this Society will be held in AVA House, Phipps Street, Deakin on Saturday 1 May commencing at 1 pm. This will be followed by dinner in the evening at Hill Station, 51 Sheppard Street, Hume at a cost of $35 per person. . On the Sunday morning a visit to the War Memorial has been arranged.

There is no registration fee for the Conference but for catering purposes please advise our Secretary Chris Bunn of your proposed attendance (02) 6241 2968 (H), (02) 6272 5540 (W).

For those wishing accommodation the Statesman Motel is offering corporate rates for those attending the Conference. {Cnr Strangeways and Theodore Streets, Curtin. (02) 6281 1777.}

The program of historical papers is as follows:

Dr. John Holt: Man, Dog and Cat - Their Relationships.

Dr. Kevin Doyle: Development of the Conditions for the Importation of Horses for the Olympic Games.

Dr. John Auty: Catarrh in Sheep - The Disease that Never Was.

Dr. Paul Canfield: The History of Women in the Sydney Veterinary Faculty.

Dr. Mark Lindsay: The History of the Veterinary Profession in the Poultry Industry.

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Obituary: Victor Gordon Cole 1915-1999

The many friends and colleagues of Victor Cole were saddened to learn of his passing on 20th February at the age of 84 years.

After his secondary education at North Sydney Boys High School, he joined the CSIRO as a laboratory assistant in the Parasitology Section of the McMaster Laboratory and served under Sir Ian Clunes Ross and Dr Hugh Gordon.

He demonstrated such a keen interest and ability in his work that he was advised by his mentors to pursue his studies in the Faculty of Veterinary Science at the University of Sydney, which he did. He graduated in 1936 but not before being awarded the William Cooper and Nephew Prize in parasitology, gaining a High Distinction in this subject.

After graduation Victor took up a position in New Zealand at the Wallaceville Research Station as a Parasitologist. He returned to Sydney a year or so later to join Grazcos as their veterinary adviser. He had an association with that company for many years, even when he was in practice in Dubbo, and later Goulburn.

During World War II he served as the veterinarian in charge of the Remount Depot at Holsworthy where he, inter alia, increased his skills in the handling of horses.

Victor was a very capable rural veterinarian, but he also had the gift of an educationalist and extension officer. This was clearly illustrated in his authorship of two well accepted texts - "Diseases of Sheep" and "Diseases of Cattle" - mainly written for the edification of stock owners and graziers.

For 51 years he contributed regular monthly articles to "Muster" and "NSW Farmer" on topical items of interest to the rural community. Victor was well versed in animal nutrition, animal management and animal production and wrote extensively in these areas.

He had a close link with the Australian Veterinary Association, serving on various committees and was elected President of the Association for 1960-61. For his significant contributions to Veterinary Science he was awarded in 1972 the Gilruth Prize, a very high honour for a veterinarian. He was made a Fellow of the Australian Veterinary Association for his inputs into the affairs of that body.

Victor was highly regarded and respected by those who had the privilege of knowing him. He was a thorough gentleman, a genial companion with a good sense of humour and a true friend. He will be sorely missed.

To his wife Joan, his surviving children, Patricia and Valerie and brother Alan we extend our deepest sympathy in their sad loss. R.M. Watts.

HISTORICAL ARTICLES

Meeting sheep scab on an early Victorian pastoral property: a story from the *Clyde Company Papers*. John Fisher
University of Newcastle

George Russell, the tenth child (out of thirteen) of a Scottish tenant-farmer, became the general manager of the Clyde Company, formed to take advantage of expansion into the Port Phillip district, in 1836. He was then only twenty-four years old, but already methodical and competent. Under his management the company prospered, and the voluminous records he maintained provide an unrivalled source on the beginnings of Victorian pastoralism from the 1830's into the 1850's

Russell's papers are an invaluable and an easily accessible source as they were edited by P.L. Brown and published by Oxford University Press in seven volumes, as the *Clyde Company Papers,* over more than thirty years, beginning in 1941. The *Papers* were extensively used by Margaret Kiddle in her great work, *Men of Yesterday*, but have otherwise been strangely neglected (the pages of the volumes held in the Library at the University of Newcastle remain largely uncut, except by me). I discovered them, almost by accident, to provide a superb guide to the preoccupations of the pioneers. Among these was the sheep disease, scab.

This paper is an addendum to two earlier articles published by the present author (Fisher 1997 and 1998) on the

eradication of sheep scab in Eastern Australia in the nineteenth century. In these articles, I argue that eradication was the result of the confluence of two streams of innovation in the Australian pastoral sector, the one technical, the other institutional. In the first, pastoralists developed new and more effective acaricides which, in combination with such innovations as the race and dipping troughs, meant that they were able to treat large numbers of sheep with minimal labour in a relatively short time. In the second, legislation was passed which eventually empowered a public body, the colonial Stock Branch, in combination with private sheepowners, to use these new techniques in a successful eradication campaign. The first stream was developed in Victoria (as it became in 1851), the second in New South Wales.

The account below is based on the main references to scab in Russell's correspondence and as set out in the *Clyde Company Papers*. It provides excellent detail which bears on both the streams of innovation. George Russell was typical of the successful Australian squatters of the mid-nineteenth century: individualists who were willing to experiment on their own but also to learn from others and to act in concert when this served the common good. His experiences demonstrate the degree to which scab threatened the profitability of pioneering enterprises from their beginnings. They also bear on the origins and development of the acaricide, a heated mixture of tobacco and sulphur, which destroyed the eggs as well as the scab mites and thus made eradication possible. His records also provide information on why the successful dipping-mixture was not more widely adopted after its development in the mid-1850's and also demonstrate that Victorian pastoralists were as keen to develop a comprehensive approach to the control of scab as their counterparts in New South Wales.

Margaret Kiddle (1961:63) remarks that `every flock was scabbed at one time or another during the forties' in the Western Districts of Victoria. In fact, throughout that decade, George Russell seems to have kept the Clyde Company's sheep reasonably free of scab through his vigilance and careful precautions. As he noted, late in 1841, such freedom was `a rare occurrence in this colony' (*CCP* III:141). However, he remained on a constant alert to the threat, recording the rumours or reality of scab in his neighbours' sheep at various times (for example *CCP* III: 138, 232-3, 275 and IV:232). He was also ready to sue sheepowners who took their flocks across the Company's runs without permission (*CCP* III:445) and to invoke the various Scab Acts (at this time, these were still the New South Wales Acts) against neighbours whose sheep strayed on to the Company's runs, (*CCP* IV:379-80; V:409). The reason was straightforward. One of his correspondents estimated `clean sheep to be worth at least 2/6 per head more than scabby ones' at a time when sheep were worth about 10s (*CCP* III:523).

Despite his precautions, the Company's flocks still suffered from outbreaks of scab, in dealing with which Russell faced the common problem ; he `could not get them dressed for want of men' (*CCP* III:255). After some rams he had bought took the infestation into a flock of young ewes in 1845,, to `save the expense of dressing them, as well as to avoid the risk of infecting the other flocks, I considered it the most advisable mode to melt them for their Tallow' (*CCP* III:511-2). It is thus perhaps surprising that Russell was still dressing any infested sheep for scab by hand a year later (*CCP* IV:143), despite knowing of the development of races and sheep dips elsewhere in the district. However, as he put the problem:

> What I fear most is the difficulty of preventing infection after you have been at the trouble & expense of dipping: there is so much traffick with sheep in this Colony, to and from the Lakes &c., that unless all the sheep in the Island were perfectly clean it would be next to impossible to prevent mixing in some way or other which would render all your labour of no avail; and altho' you might have it in your power to get those thus trespassing fined, it would not be any compensation for the injury you wd sustain (*CCP* IV:335).

Nevertheless, Russell took a constant interest in attempts to develop a superior acaricide and in efforts to contain the disease. In 1846, he was still using a traditional British dipping-mixture based on turpentine (*CCP* III:527) but, two years later, was considering the costs and benefits of dipping in corrosive sublimate (mercuric chloride), `although some other substances are talked of, such as tobacco water with a mixture of sulphur'(*CCP* IV:336). This represents one of the earliest mentions of the basic ingredients of the mixture that was eventually to be put to successful use.

Anxieties increased even further after the gold rushes with the resulting loss of labour making sheep more vulnerable than ever. Russell joined in local discussions for `fencing-off' their clean district (in the southern part of the Western Districts). Scabby sheep were to be destroyed and their owners compensated from a fund financed by a levy of £2 per thousand sheep (*CCP* V:527). This was a projected action that ran parallel to those initiatives further north that were eventually to lead on to a successful eradication programme. In the Western Districts, however, they were aborted when, early in

1854, a series of wild storms led to such a general mixing-up of sheep that Russell decided on individual action.

Large quantities of arsenic, tobacco and sulphur were ordered in 1854, as well as an extra boiler to supplement that already used in sheep-washing (*CCP* VI:22-3). By the middle of the year, although no evident signs of infestation had appeared, he had the means for a mass dipping of his sheep: `it would be well to be in some measure prepared' (*CCP* VI:70-71, 119). At this point, Russell was still using arsenic as the main ingredient in his mixtures as he had not yet learnt how to use his sulphur (*CCP* VI:187-8). However, he was fortunately placed; John Rutherford took the neighbouring station at Hopkin's Hill in the same year.

This was the John Rutherford credited with inventing the dipping-mixture that led eventually to the eradication of scab (Seddon 1964; Pullar 1967-68). He was presumably the source of advice that led Russell to adopt the `hot tobacco & sulphur' during the next year (*CCP* VI:326). Certainly, Rutherford had `become an extensive authority on the subject in these parts' by November, 1856 (*CCP* VI:382). Russell found the mixture effective and the success of the potion seems to have been a factor in the renewal of expansion plans by the Clyde Company. After earlier pessimistic discussions of reducing stocking rates, giving up land and switching to cattle, it acquired a further run near Portland in 1857. Russell's experiences in this area, where scab remained prevalent, help explain why, despite the fact that it worked, the new mixture became neither widely used or even known.

For Russell, while `tobacco & sulphur has increased the outlay considerably,' he was convinced that `these are articles

indispensable on a sheep station.' For the Clyde Company, investment in the expensive but thoroughly-effective mixture was worthwhile in the face of the continuing risk of reinfestation. It was a different matter for `the neighbours here [who] are all more or less scabby, & persist in using arsenic; it is quite a common occurrence for them to lose several hundred in dipping a flock, but the few I have seen will not be persuaded to give it up (*CCP* VI:498). As a correspondent expressed the problem earlier, `I am afraid Rutherford's recipe is too expensive to go down with some of them yet (*CCP* VI:381-2). Russell had to endure more unpleasant episodes over the next few years with scab among straying sheep and those purchased for restocking the station (*CPP* VII:180-81), although he was pleased to report that the neighbours were slowly becoming converted to tobacco and sulphur by the end of 1858 (*CCP* VI:533-4, 544 and 567).

This resistance came in a region where the benefits of the heated tobacco and sulphur mixture were well-known. Further, and beyond the cost of the mixture itself, where races and dips used inexpensive capital assets to save on labour (even the dip might be only a trench dug in the ground), application of the hot mixture required substantial investment in boilers and iron tanks. This was not a problem for large capitalist enterprises; they would already have possessed boilers for use in sheep-washing - another distinctive feature of contemporary Australian pastoralism (Raby 1996:100-111). The complementarity of such investment accentuated the existing advantage of size of production unit in Victoria, but also militated against the universal adoption of the new mixture.

Certainly, Rutherford's success was not immediately appreciated outside of the Western Districts; it contended with numerous rivals until the 1860's. In 1863, trials of a variety of

dipping-mixtures' were held in both Sydney and Melbourne, with inconclusive and thus disappointing results. Although a tobacco and sulphur mix was among those tested it does not seem to have been brought to the requisite temperature and fared no better than its rivals (*SMH* 23 September, 2 and 3 October, 6, 7,and 9 November, 1863; *Argus* 17 September, 6 November, 1863). As a New South Wales grazier asserted, `with all the appliances, the capital, and labour available in that colony [Victoria], there are now more scabby sheep there than there were ten years ago'(*SMH* 9 July, 1863). It was perhaps no wonder that he and others remained dubious as to the possibility of a permanent cure at that time.

The means towards the full eradication of scab, which necessarily entailed the enforcement of colony-wide controls, were developed in South Australia and New South Wales rather than in Victoria. Although Victoria then followed their example in the 1860's. George Russell still had to endure the occasional outbreak as late as 1871. By this point, he seems to have been using lime and sulphur, which became the favoured treatment (on the grounds of expense), as a dipping-mixture. A letter from James Riley, writing as the responsible sheep inspector for the district, thought the outbreak `another proof of lime & sulphur being useless both as a prevention and cure' (*CPP* VII:400-01). Despite this, and while scab had not yet been eradicated when George Russell retired as general manager, the prospect was increasingly imminent. A friend's letter of 1873 to Russell, then on holiday in Scotland, described the last stages of the Victorian eradication campaign (*CPP* VII:482), a major episode in a major Australian achievement.

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New Directions. The Veterinary Profession in Australia in the 1920s: John Auty, 1 Chatham Street, Flemington, Vic. 3031.

[This paper was delivered at the ANZAAS Conference in 1981.[1]]

The first World War brought changes to the Australian veterinary profession which cannot be overstated. Prior to the War the profession had been isolated in small enclaves in the States and lacked influence in State Departments of Agriculture where its field of interest was thought to be narrow and restricted to diseases of animals. On war service the Australian veterinarian became critical to a war effort sustained by horse transport. Max Henry in the first number of the Australian Veterinary Journal in 1925 wrote in his editorial "In some ways nothing could have done our profession more good."[2] The War had demonstrated to the whole of the profession (for nearly all served) that veterinarians had a place in the future development of Australia in the widest sense.[3]

The war had proved less kind to the veterinary schools. Stewart was prevailed upon to return to the University of Sydney to fight for the School's survival. Woodruff did not return to Melbourne until 1918 and this, accompanied by the failure of the Victorian administration to provide opportunities for the employment of veterinarians hurt the chances of survival of that institution.

The profession entered a golden age in the 1920s. Although the empire of the horse was ending the provision of more rapid and flexible motor transport opened up more possibilities for the profession in the services it could render to the stock owning public. The soldiers and closer settlement schemes were to throw up problems of disease and nutrition that only veterinarians could answer. The work of bacteriologists became important in providing vaccines for the protection of livestock endangered through pasture improvement and increased stocking rates. In the small animal field better anaesthetics provided the opportunity for more advanced surgical interferences and X-ray technology would be used before the decade was out. The threat of new diseases both from overseas and from the north showed the value of veterinary services leading to dispersal and new opportunities for the wealth of excellent young veterinarians who were graduated and tempered prior to the war and in the post-war period.

Providing the cement for all of these developments was the Australian Veterinary Association created finally in 1921 and the Journal, brought hesitantly into existence in 1925, Max Henry, in the editorial quoted above, went on to say -

> "For the first time in our history men from all Australia were thrown together in such a way as to obliterate the names of the different States. The word 'Australia' was carried on the shoulders of every man and it became a matter of far more importance that a man was '4th Division' than from New South Wales. The latter fact counted for nothing. So there grew up in the minds of many of us a great determination that when the time came we would allow no obstacle to stand in the way of achieving that unity which alone can give to our

> profession its due and just rewards. Unfortunately we have to some extent lost touch with that high resolve. And in so many other phases of life, we found on our return a deadly and disintegrating influence at work."

These words were written to launch the first number of the Journal in 1925, but Henry looks back to the time of the formation of the National Association. As soon as veterinarians began to return from overseas the State Associations once more became active. In New South Wales the first post-war meeting of the State Association was held in Sydney in August 1919 and that of Victoria in Melbourne in March 1920. The South Australians met in May 1920. In Western Australia an Association was formed. Henry, who had been made Organising Secretary for a National Association in the antebellum period wrote to the State Associations and to veterinarians in those States lacking an Association to arrange a meeting in Melbourne and requesting that delegates be nominated. The meeting was held on 12 January 1921.

The first annual meeting of the Association held in Sydney in April 1922 moved resolutions for representations to the Commonwealth Department of Health and the State Departments of Agriculture. The scientific papers show the wide interests of the post-war profession: bovine pleuropneumonia; forage poisoning; tuberculosis in cattle; stallion registration; control of biological products. Four of these subjects were closely associated with government activities: external and internal quarantine and registration.

The Journal proved to be an instant success. It brought the news to 130 AVA members, 73 outside subscribers, 79 exchanges and 14 advertisers: 296 in all. In its first year its four

issues cost the Association £39 or about 5/- per member. The Journal was to be challenged through the years as failing to meet the diverse needs of the membership but the ability of the honorary officers to run a sound economic enterprise has never been challenged. Henry, in his first editorial, pointed out that those entrusted with the conduct of the Journal "could be sacked at any time and should be if necessary". He blessed the Journal for showing "once and for all the permanent and abiding nature of the A.V.A.; equally its failure will probably mean the disintegration of that body". The form the Journal was to take over the next several years was established in the first number - an Editorial; extensive reports of the Council and Annual General Meetings; scientific papers (the first and second in the first number written by a promising young man - Ian Clunies Ross) and clinical case reports.

The 1920s were a period of change and expansion of activities for the profession in Australia led by a remarkable cadre of young veterinarians. In Victoria Bull, Legg, Seddon, Albiston, Bennetts and Turner were notable. In New South Wales Clunies Ross early showed the abilities which were to burst the confines of veterinary science and make him a citizen of the world. Reinforcing the direct opportunities provided by the Universities were scholarships which enabled young graduates to engage in post graduate work, especially the Walter and Eliza Hall Veterinary Research Fellowships. Mrs. Hall was a daughter of Kirk of Kirks Bazaar where the pioneering Kendall had first practised. By the mid-1920s the bright young men were widely distributed throughout Australia. Carne and Seddon were working at Glenfield Research Station; Bull was in charge of medical and veterinary pathology at the Adelaide Hospital; Legg with the Queensland Department of Agriculture in Townsville. The meat inspection service of the

Commonwealth and States began expanding to meet the demands of public health especially for export markets. Veterinary practice remained viable, the older practices still finding work with racing clubs and delivery firms. There was expansion of small animal practice. In the country centres, especially in the wheat producing areas of Victoria, horse practitioners continued to make a living.

Although the twenties saw a vast increase in motor vehicles with nearly 600 000 cars and trucks registered in Australia by 1930 [4], the effects on the farms were not so marked for farmers were still dependent on the horse for traction and the veterinarian to keep him sound.

In 1923 an outbreak of Rinderpest had occurred in Western Australia in a chain of events which showed the vulnerability of Australia to the important exotic diseases. A ship trading to Singapore and backloading cattle from Derby in North Western Australia brought in a disease which spread to cattle in the vicinity of the port of Fremantle. When Rinderpest was confirmed the Commonwealth, which had no staff of its own, obtained the services of W.A.N. Robertson, Chief Veterinary Officer of Victoria, to supervise eradication. Three other States also seconded veterinary officers. The disease was eradicated in two months at a cost of £58,000. Eradication was achieved by quarantine and slaughter over an area of 80 square miles.[56]The outcome was the eventual creation of a position of Director of Veterinary Hygiene with the Commonwealth Department of Health. Robertson transferred to this position in 1926. However, it was to be many more years before the Commonwealth enlarged its veterinary cadre other than to make appointments to the veterinary service of the Australian Capital Territory.

The scare with Rinderpest in Western Australia encouraged the further dispersal of veterinarians. H.W. Bennetts who was to have a brilliant career in veterinary research was appointed as the first Veterinary Pathologist with the Department of Agriculture in 1925. In 1926 D. Murnane was employed by C.S.I.R.O. to examine buffalo fly in the Kimberleys. J.F.Filmer was already working in the West and C.R. Coop was to be recruited and located in Derby in 1928.

Because of the comprehensive nature of the Journal and its reports it is possible to trace the history of the important developments which were taking place in the veterinary field throughout the twenties. Through the twenties and even into the thirties the Journal continued to give heart to those that clung to the horse. It noted with pleasure the activities of the Commonwealth Clydesdale Horse Society and any hopeful reports on the vitality of horse transport in the cities. In the number for September 1925 it welcomed the moves to create a Horse Association in New South Wales. However, this was only shadow boxing; for the issues of the Journal showed the profession was moving enthusiastically into its scientific future and especially to investigations of the diseases of meat animals. Dr. Bordeaux, Lecturer in Medicine and Obstetrics at Melbourne, was writing in 1925 on the role the veterinarian could play in the control of reproductive diseases.[7] In the same issue of the Journal Seddon reported on the cause of botulism. Nutritional deficiencies in the diet of animals led to pica (the eating of rubbish, including bones) and to the ingestion of toxins of botulism. Investigations of the causes of botulism led inevitably to a better understanding not only of bacteriology and toxicology, but also the nutritional requirements.

In his report for 1924 Seddon lists the diagnostic work being done at the Glenfield Veterinary Research Station and drew attention to the problem of devising treatments even when a positive diagnosis could be made and the nature of a disease understood. He illustrated the dilemma by reference to streptococcal mastitis. This disease had become much more common with the development of machine milking and was costly to the dairyman and to the dairy factory. He pointed to the encouragement which this disease gave to the sale of quack cures. He looked to drug therapy to resolve this problem which was indeed to become manageable only with the use of penicillin 25 years later.[8] In the same issue Bull noticed the work of Little and Wright on milk fever in which they showed a lowered calcium level and refuted Pugh's ketosis theory.[9] It is regrettable that a practising veterinarian such as Fethers failed to pick up this lead and follow it to its conclusion in the successful treatment of milk fever.

Henry in his editorial for December 1925 discussed "Canine Practice" and called for increased status for this branch of professional work. He pointed to the value of advances in asepsis, antisepsis and anaesthesia in making possible the surgery which the sentiment towards pets sought and justified. In his support for small animal practice Henry gave full measure by publishing sixteen papers and seven abstracts on small animals in this issue of the Journal - an effort never approached even in the palmy days of modern day practice.

The Journal for 1926 shows the veterinarian in the role of politician. In editorials Henry castigated the profession for "Defeatism" but was able to follow this up with a foot note "Optimism". In the former editorial he pointed to progress over the "last twenty years".

> That period has seen the establishment of two university veterinary schools, the formation of the Australian Army Veterinary Corps . . . the replacement in every State of the lay officials by the veterinarian as officers in charge of disease control; the appointment of veterinarians as Chief Quarantine Officer (Animals) in every State; the building of two excellent veterinary research institutes and the projected establishment of others; the creation of the fine meat inspection service of the Commonwealth Government and the growth of public appreciation of the enormous economic value of that service; the passage of legislation regulating veterinary practice in three States and other instances of progress too numerous to mention".[10]

Three months later he was able to refer to further progress; "the research appointments under the Council for Scientific and Industrial Research; the McGarvie Smith Research Scholarship in Veterinary Science; the curiously described position of Herd Tester at Canberra; an Inspectorship . . . and a Veterinary Research position" (in New South Wales). The Journal noted two reports; the Royal Commission on Health; Australia 1926 and the Bubberman Report. The former dealt with several zoonoses and the role of the veterinarian in control and eradication. It called on the Commonwealth through its Division of Veterinary Hygiene to "stimulate efforts to deal with the question of every State". The report made by Dr. C. Bubberman on behalf of the government of the Dutch East Indies examined animal disease and veterinary organisation in Australia as they affected the export of cattle and meat to the East Indies. Bubberman was critical of much in the veterinary organisation he found in Australia. The upshot was a ban on

exports of dairy cattle from Western Australia, South Australia and Queensland. He also insisted on "continuous and direct veterinary supervision" in export works.[11]

The need for "Imagination" in veterinarians was the topic for Henry in his editorial for June 1927. His severity towards his colleagues must be questioned, for in the January Journal Seddon speculated on trends in veterinary research; Thomas explored the needs for nutrition research; Alexander reported some recent experiments on pasture improvement in New South Wales; Legg recorded infestations of starving sheep with cattle tick; Webster, writing from New Zealand, noted the relationship of cervicitis to sterility in the cow; Fethers detailed a herd health approach to the control of abortion disease; Robinson examined the uses of barium chloride; Finlay reported experimental studies on the development of character in fowls; J.R. Stewart illustrated the dangers of the use of non-pathogenic virus for the vaccination of cattle against pleuropneumonia (the sting in the tail being the need for standardisation of vaccines under proper control); Kneebone noted venereal disease in a stallion and amongst the clinical notes Dickinson reports on "Lice in horses; How not to treat Them". Under the whip of Henry and economic necessity the profession was showing its ability to meet present needs and to prepare the future. However, amongst these signs of progress Captain Frank Bishop in the Northern Territory was appealing in vain for a motor vehicle to replace his pack horse transport. In Victoria Bishop's alma mater, the Melbourne veterinary School, was preparing to close down. Government in the State was misreading thee future.

The Journal for March 1928 had the name of a new editor at the masthead - Ian Clunies Ross. The magisterial tone

continued in the editorials. Ross's first editorial called for changes in the curricula of the Veterinary Schools. The Association had already set the basis for change in the formation of an Education Committee. L.B. Bull responded to Clunies Ross's call for thoughtful discussion in a paper presented to the Annual General Meeting in 1928. He contrasted the position which had been common 20 years before. Then students went to the schools to learn a trade. Today "our inquisitiveness has been stimulated".[12] Research must be pursued by all in the universities and this, of course, presupposes an increase in teaching (and research) staff. The question of veterinary education for Australia is a national one and we must think in 50 year terms, wrote Bull. The veterinarian of the future will be concerned with herd health whilst treatment will become the province of the practitioner of the cities and the larger towns. There must be provision for extramural training so that the neophyte veterinarian would have a knowledge of the industries he would be called to serve and post graduate training must be available. Bull read the future correctly but he failed to make due allowances for the extraordinary changes in possibilities for the profession. These were to be triggered by the revolution in vaccines and drugs and the urbanisation which would lead to increased concern for companion animals. A further stimulus to the discussion on education was the initiative of the Commonwealth Government in inviting the Director of Veterinary Education and Research in the Union of South Africa, Sir Arthur Theiler, to visit Australia and report on veterinary organisation, education and research. Seddon in a thoughtful paper pointed out that although the horse and dog were the principal teaching aids in veterinary schools less than 30% of the profession was deriving income from these species.

In 1929 the buffalo fly which had been present in the Northern Territory for many years began to spread southwards. The profession, led astray by lack of knowledge, attempted to mount a campaign to limit the invasion of the coastal regions of Queensland. Many fine phrases were used to describe the dangers of a minor pest which to this day has not been studied adequately.[13] Fortunately the governments of the day were little influenced by this empiricism on the part of a profession generally noted for its good sense. The buffalo fly passed to the area of the entomologist where it still exists today as a strawman encouraging the expenditure of large sums on research to control it through the labours of Sisypus - the dung beetle. 1929 was to prove to be a bad year for the profession. Clunies Ross, no doubt, believing that the Association should render support to all its members, further took on the role of Hercules in calling upon the Australian farmer to bestir himself to breed more horses. The farmer appears to have ignored this advice. To round out the year a most peculiar reference to the duties of the veterinary officers of the A.A.V.C. called upon them to defend the country.[14]

The year 1930 found Australia plunged into the world wide depression. Amongst the worst affected were the great livestock industries. The profession had been girding its loins unknowingly for this downturn; for years the numbers graduating from the Universities had been falling; the average age of the profession had been rising and at the depths of the depression the Journal could state without contradiction that rather than unemployment the years of the depression had seen a shortage of available veterinarians to fill positions. There is no doubt that many of those in practice had to tighten their belts along with their clients and those in government service along with their fellows had to submit to pay cuts, but all in all the

reduced intakes to the Schools in the 1920s, the closing of the Melbourne School and the rapid increase in numbers and diversity of positions in the late 20s, resulted in the profession weathering the depression relatively well. The first evidence of belt tightening was the cancellation of the Annual General Meeting proposed for Canberra in 1930.[15] The Association having won its fight with the C.S.I.R to ensure that a veterinarian would lead the Division of Animal Health now interested itself in the compulsory retirement of Murray Jones, the Chief Veterinary Surgeon in Western Australia who had been retired for reasons of "financial stringency".[16] Whether the representations of the Association based on the vulnerability of Western Australia to exotic disease had any effect (the Appeals Committee of the Public Service Board reinstated Murray Jones) the attendant publicity served notice on Governments that the profession was not prepared to surrender ground.[17]

1930 proved to be a watershed year in the development of veterinary science. In the United Kingdom the research of Laidlaw and Duncan had finally produced an effective vaccine against canine distemper, the most serious disease of dogs, and Dryerre and Greig were convinced that calcium deficiency in the blood stream produced the classical symptoms of milk fever in cattle, particularly dairy cattle; Turner in Victoria and Oxer in Tasmania had conquered black disease of sheep and the other major diseases caused by anaerobic bacteria had been - or were about to be - conquered by the use of vaccines. Of the major diseases of dairy cattle, tuberculosis, given the will on the part of government, could be controlled. Pleuro-pneumonia had been eradicated in Victoria. The basis of the planned examination of deficiency diseases was being laid down in many States. Kelly was about to import the first *Bos indicus* cattle which would make possible the massive expansion of the

northern cattle industry. Research into the wool industry was being given increased priority.

This essay has sought to show that a veterinary profession which had proved indispensable in war, engaged in self examination, supported by its professional association and journal, inspired by its teachers and led by great men proved willing and able to rise to the challenges of the 1920s By 1930 through geographical spread and a willingness to tackle problems as they arose the profession in Australia had shown its ability to follow those new directions which would enable it to become a valuable servant of the Australian nation.

References

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