AUSTRALIAN VETERINARY HISTORY RECORD

NOVEMBER 2002 — NUMBER 35

The Australian Veterinary History Record is published by

the Australian Veterinary History Society in the months of

March, July and November.

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

Victoria 3192

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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. Patricia McWhirter
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

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Annual Meeting of the AVHS, Cairns, May 2003
Call for Papers

The Australian Veterinary History Society agreed at the annual general meeting in Adelaide in May 2002 that the next meeting will be during the AVA National Conference, 24-30 May 2003, in Cairns. 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 26 May in Cairns. 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 north Queensland, will be 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.

In the early days of the Australian Veterinary Journal, which began in 1925, the first Honorary Editor, Mr Max Henry, began to receive books for review in the Journal and requests for exchanges from other veterinary publications. This material formed the nucleus of the library which was formed in 1931. Books that came for review were placed in the library.

Originally the library was known simply as the AVA Library. Following the death of Mr Max Henry in 1959 a memorial fund was established to commemorate his life's devotion to veterinary science in general, and to the AVA, its journal and the library in particular. The library became the Max Henry Memorial Library in 1961.

The early history of the Max Henry Memorial Library was recorded by Dr A K Sutherland in the Australian Veterinary Journal in 1993.

From its earliest days the library was housed in the McMaster Laboratory of CSIRO located beside the Veterinary School of the University of Sydney. T R Jones was appointed the first Honorary Librarian in 1930. Dr Hugh McL Gordon was appointed the AVA Honorary Librarian in 1932. Others who have served as Honorary Librarian are Dr Helen Newton Turner (1937 – 1939), D A Gill (1939 – 1942). Dr Hugh McL Gordon was again appointed Honorary Librarian in 1943 and served in this position until 1990 when Dr Peter J Mylrea was appointed the AVA Honorary Librarian.

The librarians at the McMaster Laboratory catalogued the books and journals and processed loan requests and journal circulations. Financial assistance for maintaining the library was provided by the AVA, the Faculty of Veterinary Science and the Post-graduate Foundation of the University of Sydney, from the Australian Veterinarians in Industry and from individual pharmaceutical firms.

During the period the library was housed at the McMaster Laboratory it provided a journal circulation service to AVA members. The number of members using this service fell dramatically after the AVA introduced a charge but slowly recovered in subsequent years.

With the growth of the Max Henry Memorial Library and competition for shelf space in the McMaster Laboratory library, a collection of 559 books of historical value was transferred to the Fisher Library of the University of Sydney in the late 1970s.

In 1990 the AVA discontinued its journal circulation service and the Max Henry Memorial Library was relocated to the Elizabeth Macarthur Institute of the NSW Department of Agriculture at Camden except for the foreign language journals, which were transferred to Orange, NSW for storage.

The AVA Executive in 1995 decided to discontinue a hard copy library. The traditional type of library consisting of books and journals was seen to be too costly to maintain and outdated by technological developments. It was considered

preferable to have an information service based on electronic methods.

The Australian Veterinary History Society at its annual general meeting in 1996, being concerned at the possible loss of the resource represented by the historical collection of the Max Henry Memorial Library, urged the Executive of the AVA to take steps to ensure its retention so as to be available to members and historians.

As a consequence of the AVA Executive's decision the Max Henry Memorial Library was disbanded. Most of the books and journals were donated to the Veterinary School in Zambia with the foreign language journals being pulped. The historical component of the Max Henry Memorial Library was given to the Australian Veterinary History Society. These books were catalogued by Dr Peter J Mylrea before the collection of over 600 books dating back to 1804 was taken to Canberra where it was housed in AVA House. The AVA provided funds for the purchase of shelving to house the Australian Veterinary History Library and the AVA Historical Collection. Dr Dick Roe was appointed Honorary Librarian in 1997.

The size of the Australian Veterinary History Library has grown slowly through the donation of books and some purchases made by the Australian Veterinary History Society. By 2000 the library contained over 800 books and manuscripts. In 2001 it was decided to transfer books previously held in the AVA Historical Collection into the Australian Veterinary History Library. Books and journals from the AVA Historical Collection were checked against the library's holdings and those that were not already represented in the library collection were catalogued and added to the Australian Veterinary History Library.

Following a decision by the AVA Executive in 1999 to sell AVA House in Canberra, the National Office moved into rented accommodation. The Australian Veterinary History Library and the AVA Historical Collection were moved into a lock-up storage unit in the light industrial area of Canberra as the rented office does not have room to house the library shelving.

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Report of the Honorary Librarian, May 2000. Australian Veterinary History Record No. 28 – July 2000.

Milestones in Australian Veterinary History May 2002

There was a report in the Australian Veterinary History Record, March 2002, announcing the establishment of the innovative "Milestones in Australian Veterinary History" project. As the co-ordinator of this program, I would like to report on what has been achieved since then. Twenty-one articles have been received, edited by Dr. Farragher and then forwarded to the University of Sydney veterinary faculty. It is anticipated they will be printed on the back cover of the student's handbook at the beginning of the new semester in July this year. They will also be available on our AVHS website. Another eight have been commissioned.

Due to the constraints of space, there has been a request to restrict articles to about 400/450 words. This can prove quite a challenge for our contributors – to present an interesting, historical and readable paper containing all the pertinent information within the confines of this word limitation.

The list of articles so far received, edited and forwarded are:

Biographies

Albiston, Harold, E.	C. Bunn
Bennetts, Harold, W.	C. Bunn
Bull, Lionel, B.	K. Baker
Cameron, Samuel, S.	C. Bunn
Gilruth, John, A.	C. Bunn
Pottie, John	K. Baker
Kendall, William, T.	R.I Taylor
Rose, Alfred L.	R.I Taylor
Seddon, Herbert, R.	R.I Taylor
Stewart John (1810-1896)	K. Baker
Stewart John junior (1832-1904	T.Farragher
Turner, Arthur, W.	R.I. Taylor
Webster, Arthur, F.	K. Baker
A brief history of the Australian Veterinary Association	D.Johns
The role of the veterinary profession in quarantine	K. Doyle
The Australian Animal Health Laboratory	W. Snowdon
Origin of the regulation of experimentation in animals	K. Baker
Origins and early development of the veterinary profession	J. Fisher
Origins early development Australian veterinary profession: 19th century	J. Fisher
Early development of the Australian veterinary profession: 20th century	J. Fisher
Recent trends in the development of the Australian veterinary profession	J. Fisher

Editor's comment : Two examples of the biographies presented are printed on the following pages to give guidance to prospective contributors.

Harold Edward Albiston CBE DVSc 1897-1994

Harold Albiston was born in Tasmania but educated in Melbourne where he became a distinguished diagnostician, research worker, teacher, editor and leader in the veterinary profession. He graduated in 1918 from the Melbourne University with first class honours in all subjects in the final year of veterinary science. He was awarded the DVSc for his research into infectious necrotic hepatitis of sheep, and tuberculosis and actinomycosis of the bovine udder.

Albiston lectured at the Melbourne Veterinary School in anatomy, pathology, bacteriology and parasitology until it closed at the end of 1927. In 1923, he was appointed officer-in charge of the Milk Testing Laboratory. In 1932, he was appointed Director of the Veterinary Research Institute in Parkville, a position that he held until he retired in 1963, and where in 1933 he instituted the first post-graduate courses in veterinary science in Australia.

Harold Albiston was the longest-serving member of the Faculty of Veterinary Science (1922-1969), of the Board of the Melbourne Zoological Gardens (1938-1981), and of the Veterinary Board of Victoria (1930-1963).

The AVA elected him president in 1932-33 and awarded him its highest honour, the Gilruth Prize, in 1959. He was a foundation Fellow of the Australian College of Veterinary Scientists.

He is especially recognised for the high professional standards he set and maintained as director of the VRI (1932-1963) and as the longest-serving honorary editor of the Australian Veterinary Journal (1939-1963). The editorial standards that he set ensured that the Journal achieved a high reputation as a scientific publication within Australia and overseas. In retirement, he edited the second edition of the six volumes of Diseases of Domestic Animals in Australia and, in 1975, wrote a seventh volume on Metabolic Diseases of Livestock.

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Jones TE. Obituary. Aust Vet J 1994;71: 391.

C Bunn
March 2002

Harold William Bennetts CBE DVSc 1898-1970

Harold Bennetts was born and educated in Melbourne where he graduated BVSc (1919), MVSc (1920) and DVSc (1931). After graduation, he worked for two years as a bacteriologist for the Commonwealth Department of Health in Cairns then returned to Melbourne as a lecturer in veterinary bacteriology and pathology at the University of Melbourne.

In 1925, he was appointed to the newly created position of veterinary pathologist to the Western Australian Department of Agriculture in Perth where he worked under conditions of professional isolation with meagre funds and assistance. In 1928-1935, he was seconded from the Department to the Commonwealth Council for Scientific Research so that the greater facilities of that organisation could be used in his studies of important animal diseases. In 1947, he was appointed Principal of the Animal Health and Nutrition Laboratory, a position he held until he retired in 1959.

Bennetts achieved world recognition for his work in the solution of three major diseases of sheep. Two of these diseases, enterotoxaemia and enzootic ataxia, precluded successful sheep farming over wide areas of the agricultural country of Western Australia in sheep. The finding of Bennetts with his colleagues Chapman and Beck that copper deficiency was the cause of enzootic ataxia of lambs was one of the first reported diseases due to trace element deficiency. His identification of clover disease of sheep as due to naturally occurring oestrogens in pasture plants was also a new concept in veterinary science. His studies of toxic plants culminated in 1956 in the publication, with CA Gardner as co-author, of the book Toxic Plants of Western Australia, a work of great and lasting value to agriculturists throughout that State.

Bennetts introduced two new concepts in veterinary pathology: the absorption of bacterial toxins through the gut wall and the relationship of disease and trace element deficiencies. His work was recognised internationally and nationally by, among others, the AVA who awarded him the Gilruth Prize in 1957.

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Gilruth Prize Award. Aust Vet J 1957;33:241-243.
Obituary Aust Vet J 1971;47:67-69.

C Bunn
March 2002

MARGARET KEATS MBE BVSc
Australia's first University-trained woman veterinarian.

Robin Giesecke 16 Gulfview Rd., BL ACKWOOD SA 5051

Margaret Gwendoline Keats was the first woman to qualify as a veterinarian with University training in Australia. After graduating from the founding course in Veterinary Science from the University of Melbourne in 1923 she conducted single handed rural practice in the north west of Victoria until 1962, earning the respect of her clients and her colleagues on the way. This account of her life and career is complemented with some of her colleagues' memories of her at the height of her career and of the rewards she received as a pioneer of her chosen profession.

The Early Years:

Her story starts in the 1890s. The pastoral industries in Australia were then suffering the consequences of unsuitable agricultural practices, particularly in the marginal lands, in the quest to grow more wool for the British spinning mills. Rabbit plagues, floods and droughts followed years of overstocking – then came the economic depression. "These factors placed the hardest of selection criteria on both man and animals: to survive or face failure."(15).

Margaret was born in 1895, one of a large family born to English pastoralist Thorold Goodwin Keats, and his Scottish wife, at "Weilmoringle", a pastoral lease in the marginal country on the banks of the Culgoa River north east of Bourke, in northern NSW. This is pertinent, for, during her childhood, she may have witnessed the suffering of her father's sheep and the later attempts to breed sheep more suitable for the Australian climate through wool classing and the introduction of the more plain bodied Peppin Merino types into the "Weilmoringle" flock. (15). Later in life she was to declare that "she wanted to do veterinary science so she could look after their own animals" (14). She always retained an empathy with people on the land and appreciated advances in the application of science to relieve the suffering of animals.

When her father bought "Gonn" Station, near Barham on the NSW side of the River Murray, some years later Margaret and her sister Sybil were sent to the Melbourne Grammar School for Girls at South Yarra – Margaret joining late in 1907. Few records remain of her school years or interests, but on 8 March 1916, she matriculated with passes in English, French, Latin, German, Arithmetic, Algebra, Geometry, Physics and History – sufficient to be accepted into the 4 year degree course in Veterinary Science at the University of Melbourne. (23). The path she had

followed to University entrance and thence into a profession through education at a private school, had, by then, become increasingly possible for girls from middle class Australian families.

The University of Melbourne, however, had retained a very conservative view of university education for women despite the Senate having resolved in 1872, in the absence of the Bishop of Melbourne's vote, that there was "no sufficient reason why women should be excluded from the educational advantages and corporate privileges of the university".(22). Charles Perry, the then Church of England Bishop of Melbourne had strongly opposed the entry of women to university on the grounds that it would "make women manly and had the potential to alter the relationships between the sexes. For women to imitate men in dress, manners, sports, studies or professional employment would be degrading"(22).

By the end of the 19th century, Melbourne, along with Sydney and Adelaide Universities, had admitted women to degree courses in the sciences and had even permitted them to enrol in degree courses in Medicine (5, 16). Melbourne remained reluctant on the grounds that "The admission of women to University degrees implies their subsequent admission into the learned professions and in to the medical profession. The thought of women in the dissecting room having to suffer the degradation of dissecting a dead man was not a happy one" (22).

So, what might have been the attitude to women doing Veterinary Science? Melbourne University had absorbed William Tyson Kendall's Melbourne Veterinary College in 1909 and this institution had already granted a diploma to one woman – Belle Bruce Reid, in 1906. (10,16). She had been registered by the Veterinary Surgeons Board of Victoria to practice in her own right on receipt of her diploma and had subsequently been well accepted into her profession. When Margaret applied to the University for a degree course in Veterinary Science – the first woman in the first Australian Veterinary Faculty – Belle Reid was conducting her own practice at North Balwyn and working as honorary veterinary surgeon at the Lost Dog's Home in North Melbourne. (11).

Margaret appears not to have met any opposition to her wish to study veterinary science either from her family, who appears to have supported her, the university administration or from her class mates. She commenced in March 1916 and remained the only woman in her year. During her period at University she lived at Trinity College (renamed Janet Clarke Hall in 1921) and although a full time resident, left no record of her affiliations with any University Clubs or activities. She took three years to complete the first year. The reason for this is not apparent,

but it was a turbulent time for the Faculty with staff being commandeered for war service and with poor financial support from the government. (10,19). From second year on most lectures took place at the Veterinary School (now the Veterinary Research Institute) and Margaret completed the second year by March 1920. Third year students were required to work in the clinic which the school ran to assist clients unable to pay for treatment and Margaret completed this year in December 1921, although she had to defer some examinations due to illness in late 1920's. (23).

Margaret passed all examinations in her final year and, having met the School's requirements for practical work by December 1922, had her degree conferred on the 21st April 1923. (23). She graduated with men of the calibre of WG Bennett and AW Turner, and became the first and only woman to graduate from Australia's first veterinary faculty. (19).

She was registered by the Veterinary Surgeons Board of Victoria, No. 194 on the register, allowing her to practice in her own right (24) on 19 December 1922, four months before her degree was actually conferred. Her entry into the profession, as had been Belle Reid's, was in marked contrast to that of Eileen Cust who, in England, had suffered alienation from her family, legal trials over permission to sit for an entrance examination to University and, finally, obstruction by the Royal Veterinary College in recognising her right to practice in her own right until 22 years after her graduation in 1900. (9). While in America Mignon Nicholson had graduated in 1903 and two other women had qualified in 1910. (8).

Establishing Rural Practice.

At the end of 1922 Margaret returned to "Gonn" Station to find that the area had undergone considerable development since she had left for Melbourne. Most of the Mallee land had been cleared and settled, the farms contributing significantly to the produce which was vital for Australia's recovery from the first World War. The Victorian Government, keen to further increase productivity, had settled 2045 returned soldiers on the land, believing that the "best way to develop the continent was through peasant farming – with numbers of families settling on small acreages"(6) Soldier settlement irrigation schemes had been set up at nearby Kerang, Swan Hill and Redcliffs – the latter a settlement planned for 12-15 000 people. (13) Horses, which had been the greatest source of agricultural power – vital to production, for harvesting, haulage, transport and pleasure as well as for the building of the extensive irrigation channel systems – were slowly being replaced by tractors and trucks.

Miss Margaret Keats MBE, BVSc.
(published with permission of Mrs. J. Sutherland)

Apart from Margaret there were no veterinarians in the area and rumour of her skills soon spread beyond the boundaries of "Gonn" Station, eventually encompassing an area extending from the South Australian border, along the Murray to Balranald and south to Bendigo – an area of some 11,000 square miles. Being a keen horsewoman and a breeder and exhibitor of horses, her services were keenly sought by those farmers who retained horses. Stake and other injuries, colic and malnutrition were common disorders. Her Father provided one of his stockmen, Fred Schramm, to be her assistant and he became her right-hand man, assistant and driver for many years.

Though a horse lover Margaret was there with her generation to value the motor car. She drove her trusty Ford over unmade roads and the sandy Mallee tracks, often using chains for traction but resorted to horse and jinker occasionally through winter. As two of her brothers eventually settled in Queensland, Margaret drove, by car, through the back country of NSW to visit them, undeterred by the isolation and the state of the roads.

Not only were there no other practicing veterinarians in her area in the 1920s there were no Government Veterinary Officers. At the time each of the States had separate regulations for policing their Acts to control livestock disease. (18). The Victorian Government of the day, under the agricultural leadership of SS Cameron, was strongly antagonistic to veterinarians undertaking stock inspection duties and tuberculosis testing. (16) It is then much to Margaret's credit that she was appointed a border inspector of stock in 1925 (2a) at a time of impasse between the government and the veterinary fraternity. She had specific responsibility for checking the livestock crossing the Murray at Gonn Crossing as often as three times a week. To provide the necessary authority to enable her to carry out these Government responsibilities, Margaret was appointed a Commissioner of the Supreme Court. (21). At that time women in Victoria were still unable to act as Justices of the Peace but through this appointment, Margaret became the first woman veterinarian to be employed on government business, working for both the NSW and Victorian governments. (2a)

In addition to these responsibilities Margaret and her sisters managed "Gonn" Station during the 1920s due to their Father's illness. After his death the property was subdivided and sold and Margaret moved to Kerang in the early 1930s living first at the Model Farm and then at 60 Wyndham St, which remained her home and practice base until her death in 1970. For many years she also supervised the health of her brother's dairy herd which supplied cream to Kerang. (21)

The Great Depression

The 1930s Depression hit many of her clients hard. Bank foreclosures on properties became common and a life of subsistence and sacrifice became the lot of many. Margaret gained a reputation for not managing the business side of her practice very well, but it is possible that the stringencies imposed on her clients at this time underpinned her reluctance to charge relevant fees for her services, or to send no accounts at all. Her sympathy, or perhaps empathy, with their plight became a nightmare for her accountants for the years she remained in practice – long after the effects of the Depression were overcome. (21)

John Auty, who worked as a locum for her in the 1950s, recalls, that even then "accounts were sent out at very long intervals and sometimes not paid for three years or so, particularly in drought years. If the cumulative account seemed too large, Margaret would trim it to almost nothing. In better times accounts were paid after the annual draft of weaners were sold, or the wheat or wool cheques came in."(3a) Neville Japp, who also did locums for her in 1959, recalled some of her accounts

being seven years behind (11). Some farmers paid in kind with chaff or wheat or oats, a pair of ducks, or some service. Some who were struggling were never asked to pay. (21).

Her generosity and dedication to clients did not go unnoticed. In the fifties, when times were better, she was rewarded for her selfless devotion to the treatment of animals through times of drought, depression, floods and grasshopper plagues by the local farmers groups. Her niece recalled an instance of that self devotion when Margaret had attended a case on the other side of the River Murray, inching her way across the girders of the partially built Murrabit Bridge, pushing her bag before her. (21) In 1957 the local branch of the Victorian Wheat Board presented her with a wristlet watch. With typically modest response, Margaret responded by saying that "she had not minded treating animals under all kinds of situations over the years – for when you treat animals you know what to expect" and she admitted to having been helped over bad roads and through cold nights by the attendance of those concerned. (14)

The following year the Murrabit branch of the Dairy Farmers Association presented her with perhaps a more practical gift – an electric frypan – and in the New Years' Honour List of 1959 her work within the community was further recognised through the award of an MBE (Member British Empire) citing her "outstanding devotion to the care and welfare of sick and ailing animals". (21)

Practice in the Post War Period

John Auty recalls that, in the 1950s, "the practice was conducted from a free standing room set up as a pharmacy in which there was an operating table. Another table was set up under the pepperina tree for inspections of animals brought in to town. Dotted around the yard were 6-8 wire fronted boxes which were used for "canine inpatients" indicating that Margaret was treating small animals. There was no running water in the shed. One washed in a basin and Fred poured rainwater from the tank over your hands. Margaret employed locums to allow her to 'look in to the business side of things' and to read up on the latest scientific advances rather than take a holiday. The locum lived in and dined, invariably, on roast meat, potato and pumpkin, the remains of which became cold meat and salad the next day." (3a)

Though the Depression had led to women undertaking more of the labour on farms, it is probable that Margaret's acceptance by male farmers, at a time when professional working women had not yet become the norm, was because she was the only one able to provide the required skilled assistance. Additionally she was also

renowned for her knowledge of the locality, the histories of individual animals and for her ability to make diagnoses over the phone, suggesting treatment from the farmer's own supply of medicines. (3a,21) She was respected for her code of ethics and for ability with horses and larger animals, even though she was of diminutive stature – as Neville Japp described her (12) – "knee high to a droughty jockey. She had a great rapport with clients and was unwilling to admit defeat- any patient that died on her was not really trying" (3a,3b) She was always neatly dressed in jodphurs, shirt and tie, coat, and felt hat (21) – some thirty years before slacks became acceptable wear for women in Australia.

In the early 1950s Margaret was one of 20 (3%) women of the 565 vets registered in practice Australia wide – a situation which was to change rapidly after introduction of the Commonwealth Reconstruction Scheme scholarships in 1947 (7) which encouraged University enrolments. Until the immediate post war period it was claimed, incorrectly, that Margaret was the only practitioner between Albury and Adelaide. Indeed rural Victoria remained poorly served by veterinarians until the early 1970s, the number of private practices only increasing rapidly from 1947, until there were 61 veterinarians in 57 practices in 1957 (1b). In Margaret's area Evan Brough is thought to have established a practice at Kerang in the late forties and Ray Chatham at Cohuna and Joe Berriman at Rochester in the early fifties. The Department of Agriculture still employed more lay inspectors than veterinarians and the Veterinary Officer stationed in Bendigo in 1954 was responsible for 26 shires. (1c)

The emphasis in rural practice had also changed by then – with less dependence on horses, the greater need to understand the new nutritional problems arising from land clearance and livestock management and the need to service small animals in urban communities. Margaret enthusiastically embraced these changes and was frequently one of the first to try new techniques.

In 1962 she employed her first veterinary assistant – Emily Maudsley, a Queensland graduate, daughter of a Melbourne neurosurgeon and herself a keen horsewoman. Emily remained her assistant until 1970, buying the practice on Margaret's death. On her leaving practice, it passed to Jan Wyld, and the practice had been run entirely by women since it was established by Margaret in 1922.

Membership of the Australian Veterinary Association.

Margaret's entry into practice in 1922 coincided with the rebirth of the Australian Veterinary Association in Victoria though she did not herself become a member

until 1926, when she was sponsored by Professor Woodruffe (2b). She became a very keen member, driving the 180 miles to Melbourne or the monthly Divisional meetings and even attending the national conferences (2c). She was not the only woman present at the Divisional meetings, for Belle Reid and Dr. Georgina Sweet – an honorary member (2c) – occasionally attended until the 1930s. Dr. Sweet, a world renowned parasitologist, lecturer and firm supporter of the ability of women to contribute to science, had also been acting Dean of the Veterinary Faculty in 1924 (20) and may have seemed a bit daunting to Margaret, who as Jack Arundel recalled, always sat in the front row, taking copious notes and clarifying any points quietly with the speaker afterwards. She rarely spoke up during the meetings – and when asked why not, she replied that "she didn't like to ask what seemed a silly question in front of all the distinguished people present" – not appreciating that she was probably one of the most experienced practitioners present. (1a). John Auty recalled that at the meetings where new Department of Agriculture vets gave short dissertations about their work, she was addressed separately, 'President, Miss Keats and Gentlemen", but at one of these functions Gough Letts inadvertently began "President, Ladies and Gentlemen – oh! And Miss Keats", which brought the house down (3a) and probably appealed to her own sense of humour. She remained a loyal member of the Association and her notes of meetings and her later gift of the copies of the early AVJs to the re-established Vet School Library have left a permanent record of her involvement with the profession (1a).

Though she never spoke or presented papers at these meetings, her skills in equine surgery were well known. She was finally persuaded to demonstrate a standing cryptorchidectomy at the Annual General Meeting of 1967. It was a great success despite her reluctance to put herself forward, her age (70) and her small stature, which meant that she had to stand on a box to operate. (1a) The event did nothing to diminish the respect of her colleagues and the story even entered the folklore of the Kerang district.

A breeder of thoroughbreds

Margaret never lost her love of horses and as she became less involved with practice she had the opportunity to achieve her lifelong ambition of winning a race with a horse which she had bred. On Easter Monday 1968 she succeeded with a horse named "Fight On", receiving her trophy from Sir John Gorton, the then Prime Minister. (4,21). The horse subsequently won the Kerang Cup three times, the last only days before her final illness (21). Throughout her career she was the honorary veterinary surgeon to the Kerang, Swan Hill, Moulamein and Gunbower Turf Clubs, the Kerang Trotting Club and the Kerang Agricultural Society. (21).

A legend in her lifetime

Margaret became ill on return from her latest successful race meeting and died in hospital several days later, on 6 April 1970. Her 75 years had spanned two economic depressions and two world wars, not only surviving, but endearing herself to many people, through the times of great change in social attitudes and the growth of the veterinary profession which followed. She had partaken of the advances in veterinary medicine in that time experiencing the use of vaccines for prevention of livestock diseases and the introduction of antibiotics which revolutionised small animal medicine. (3b). She had provided encouragement and leadership to men and women of the profession and proved a remarkable role model for women to follow in the profession.

Her dedication to the task of caring for animals had left no time for marriage but she was beloved by the rural community she served. The local press expressed the communities' grief on her death by remembering her "unique ability to inspire loyalty among those with whom she became acquainted – loyalty inspired by her willingness to sit around the clock if necessary, with sick animals." (17).

The profession also mourned her passing, the then President of the Victorian Division remarking that "she had shown by example that veterinary practice could be done well for a long period by a woman." A colleague, who would have known her from student days, wrote that "those who had been privileged to know her personally will always remember Margaret for what she was – a quiet, unassuming and gentle person never known to speak a hard word or to do an unkind act to man or animal". (2d)

Today, in the Kerang Historical Museum, there is a room of Keats memorabilia. Her veterinary instruments, her riding boots, the buggies she drove, newspaper cuttings of her exploits and community awards, along with examples of the beaded collars she used to make in her spare time, are preserved as a tribute to a much loved and appreciated member of their community – who had become a legend in her own lifetime.

Acknowledgements:

Without the ready assistance of Margaret's niece, Jill Sutherland, and her colleagues John Auty, Neville Japp and Jack Arundel, who provided their personal accounts of Margaret, this story of her life and career may have remained a statistical one. Valuable assistance was also provided by the Archivist of The University of Melbourne and the Veterinary Board of Victoria.

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INNOVATIONS AND INVENTIONS IN THE AUSTRALIAN SHEEP INDUSTRY

1. Boiling Down

Ian Parsonson

A general economic depression occurred in Australia during the years 1841 to 1843, which affected all the colonies. The causes for the economic crises were multiple; commencing with a financial crisis in Britain from 1839 to 1842, followed by a fall in the British prices for wool, at the same time a severe drought occurred in New South Wales. There were additional factors also that were causing major problems in the other colonies, especially in the embryonic Port Phillip District where there were acute labour shortages and frenzied land speculation. The Depression was also greatly exacerbated by the financial policies adopted by the State and local governments of the time.

Initially in the Port Phillip District it was relatively easy to borrow money and invest in sheep. This provided a capital gain based on the natural breeding increase of sheep flocks and from the sale of excess sheep and wool. Establishment costs of properties were high and during the initial years, the short-term value of the enterprise was geared to the price of sheep as the price obtained for wool hardly covered running costs. Sheep values were dependent on the demand for sheep. In the 1830s the market for meat established the price of sheep. From 1835 the demand was for sheep to stock the newly acquired land and as long as there was a shortage of sheep, the price was maintained. Sheep to maintain the demand in the Port Phillip District came from Van Diemen's Land and from New South Wales across the Murray River. Once most of the land in the new colony was occupied and adequately stocked, the demand for sheep fell. As new sheep properties were developed and stocked with sheep, natural reproduction, maintained, and then increased their numbers. Sheep became available in greater numbers as fat stock for the meat markets and as surplus stock for sale. As there was now very little demand for stock from either market, as sheep were not selling, the numbers of surplus sheep on properties increased rapidly. Sheep prices fell, and coupled with that fall, there was a precipitous fall in the paper valuation of land.

In 1839 the rights to a property on Jackson's Creek in the new colony were sold for £95 and the sheep on it averaged 35s per head with prime ewes at 43s per head; by 1843 sheep on the property were 6s per head or less and there was no charge for the property because it was of no value without an assured return from sheep.

Investors from New South Wales and Van Diemen's Land had joined in the rush to take up land in the new colony of Port Phillip and then preceded to sell and resell the land at ever increasing prices, often sight unseen. When the value of sheep and

land began to fall, there were pressures to repay loans and the previously booming confidence in the future of the new colony fell rapidly. Peel noted that during the depression 30 per cent of the land remained in the occupancy of those who held it before the depression, while 20 per cent changed hands and the remaining 50 per cent was resold at least once.

It was the price of sheep that was of greatest concern. Would the sheep price fall to the value of their skins or the wool they carried? At that time wool was fetching 6 pence per lb on the London Market and Australian sheep were only cutting a few pounds of wool. In reality, sheep had lost their value.

Henry O'Brien from Hardwicke near Yass, New South Wales, came up with the expedient of boiling down surplus sheep and cattle for the value of their tallow, skins and hides.

On 9 January 1843 Henry O'Brien's first sheep were boiled down and the successful experiment was reported in June 1843. O'Brien demonstrated his method by boiling down two sheep from a flock of 650 taken to Sydney for sale. The Sydney Morning Herald 19 June 1843 reported in full, the experiment that was held at O'Brien's premises in Fort Street, Sydney. In the same paper there was an anonymous editorial extolling, "Our new export", tallow to Great Britain. O'Brien's letter in the Sydney Morning Herald on 19 June 1843 and the support of the editor in a second leading article on 24 July 1843, explaining that boiling down enabled farmers to recoup money from the tallow of virtually valueless sheep guaranteed spread of the good news.

O'Brien's brilliant innovation ensured that the residual value of surplus sheep and cattle could be realised at little cost and also set a minimal price for stock. Boiling down was almost the perfect solution for what was a desperate situation for the colonies. As well as getting rid of excess and diseased animals it provided the opportunity for the pastoralists who were anxious to improve sheep and wool quality to set about achieving their aims.

Henry O'Brien came from India to New South Wales in 1815 to join his uncle who was a wealthy merchant in Sydney. O'Brien's uncle purchased sheep for his nephew and enabled him to take up sheep runs, at first near Bathurst New South Wales. Then by 1829 Henry O'Brien had large grazing land holdings on the Murrumbidgee and Yass Rivers. O'Brien purchased rams from John Macarthur that were the first Merino types introduced to the Yass area. As one of the early settlers he was well established in Yass when Captain Charles Sturt came through in 1828 at the start of an exploration trip with Hamilton Hume that led to the discovery of the Darling River.

Henry O'Brien attempted to have the township of Yass laid out on a subdivision of his land and to change the name of the town but failed in both endeavours.

O'Brien developed a reputation as a tough man because of his attitude towards the numbers of bushrangers in the area. He and his neighbours were armed when they rode around their properties and they challenged anyone found on their land that did not have a good reason for being there. It was reported that O'Brien even drove off teamsters who camped on his land forcing them at gunpoint to harness their teams and move on into the night.

As a local explorer (Hamilton Hume was a neighbour), O'Brien overcame the obstacles of the impenetrable gorges and ridges of the mountains by finding a satisfactory route to get their produce overland to the Sydney markets and established a new trail from Appin to Figtree on the coast. The only route for produce before that was to the coast and then by ship to Sydney. Governor Macquarie, with O'Brien as his guide, used the new trail on his tour of the Illawarra region.

The O'Brien's and other settlers had lost hundreds of head of stock to 'cattle duffers' and to so-called 'gully-rakers' who would alter brands by over-burning or plucking hair to change the original brand. Gully rakers received their name because they used raw-hide stockwhips known in colonial times as 'gully-rakes', the rustlers would search the gullies for cleanskin cattle and brand them with their own brands. Neil O'Brien (Henry's brother) and William Hazell joined forces to deal with the rustlers. William Hazell, known as 'Wallabadoola Jack,' was serving a life term as an indented servant when he stood with his master against bushrangers. For his help in identifying bushrangers Hazell was granted a ticket of leave by Governor Macquarie provided he served as a police constable at Goulburn. Over the three years from 1841 to 1843 Neil O'Brien and Hazell captured 14 men and brought them to trial for cattle duffing.

Soon after he published his results 'Boiling Down' became widespread in the colonies and boiling down works were built in all centres. It was estimated that two and a half million sheep and half a million cattle were converted to tallow and skins each year adding value to the export market when there was little residual value from the sale of stock either for meat or replacement.

In the Western District of Victoria, George Russell, Manager of the Clyde Company, Golf Hill, Victoria, followed the reports from New South Wales, and in August 1843 experimented by boiling down two ewes. He reported the results to the Geelong Advertiser 21 June 1843, "The current price for tallow from fat sheep would be from 7s to 9s per head after paying the expenses of the process of boiling down (while) the butchers were giving 45s to 55s for fat sheep with little or no demand for them".

At the same time Stephen Henty at Portland tried out the process with satisfactory results.

Boiling down establishments were soon operating in Melbourne, Geelong and

Portland. Boiling down of surplus sheep, cull animals and badly infested scabby sheep continued through the remaining years of the 1840s up to the time that the gold rushes led to an increased demand for meat in the early 1850s. The English market provided the outlet for tallow and boiling down became an important industry. Four establishments in the Port Phillip District boiled down 91,000 sheep and 3000 head of cattle in 1844.

George Russell sent the half-yearly report of stock dated 15 August 1843 to William Cross, Secretary of the Clyde Company in Glasgow. In the report George Russell, quickly embraced the concept for selling excess sheep and recorded his results and comments on boiling down in reports to the owners of the Company.

"Some colonists have recently been endeavouring to boil down their surplus stock for the sale of tallow, which is intended for exportation to the English market. I recently made an experiment with two ewes, they weighed 60 1/2 lb each or 121 lb in all: from this I had 50 lb of good tallow and their hind legs or 20 lb of mutton. The tallow from a/c sales of some that was sent from this is worth 3d to 3 1/2d per lb or about 6/8d for each sheep; the meat saved is worth 1/4d; and the skin is generally worth from 9d to 1s each thus making about 8s or 9s the value of each sheep. This circumstance has been creating a good deal of sensation throughout the colony, particularly on the Sydney side, where I believe it is being carried out to some extent. It will at least do some good by fixing a minimum value for our stock."

Russell included the full details of his experiment and his deductions in a letter to GT Lloyd on 21 August 1843, because Lloyd had advertised his intentions to open a "melting-house." The letter, deserving of attention, filled a third of a column in the Port Phillip Patriot 31 August 1843.

The importance of boiling down to the squatters can be seen in a return from Charles John Dennys to George Russell. "Five lots of the Clyde Company's sheep were 'melted' between 8 November to 6 December 1848 amounting to 5217 sheep which yielded over 56 tons of tallow."

The expenses for one draft of 1611 sheep on 8 November 1848 was shown as:

Expenses		
1611 sheep boiled at 11 pence		£73.16.9
Salting 2 tierces of mutton 8s 4d		0.16.8
Casks for 18 ton tallow 50s		46. 9.6
2 Tierces	10s	1. 0.0
Shepherds' rations		... . 6.0
		£122.8.11

Credit	
By 238 Legs Mutton sold in store, 4 1/2d.	4. 9.3
250 " " " by hawker 4 1/2d	4.13.9
17 " " " on establishment 6d	8.6
	£9.11.6

Due to the establishment £112.17.5

The members of the Clyde Company were pleased with the profits from boiling down as shown by the letter from Edinburgh sent by Captain Wood to George Russell on 24 March 1845, "The melting down the stock has been the salvation of the colonies and I trust the Indian market will greatly advance the price of horses." As it was desirable to breed from the ewes as long as they were able to produce a lamb, for the purpose of filling up runs or stocking new country, very few ewes ever reached the butcher, and the remaining ewes that did not live out their natural lives were sent for boiling down. It even paid to boil down fat wethers when the market was a little depressed with tallow at £28 per ton, wethers were netting 7s 6d., for thirty pounds of tallow and the skin paid the expenses. Stockholders pressed for money resorted to boiling down to provide income. This system was continued, more or less, up to the gold rush era, when a ready market was found for sheep meat at prices rising to £1 per head or more.

Alfred Joyce gave a rather graphic description of boiling down in his book, A Homestead History.

"When sheep began to increase at a greater rate than local consumption could absorb, boiling down for tallow was adopted as the only means of disposing profitably of the surplus and it set a price level. Ewes were bred from as long as they produced a lamb, very few ewes were sent to butchers but those that did not have a lamb went to the boiling down vats. We boiled down the first lot of ewes culled by Mr. Goldsbrough, numbering about 1,100, and yielding about twenty pounds of tallow each, netting about 5s per head, a price that we considered quite satisfactory at that time. Our neighbour boiled down a somewhat larger number, with about the same results, and these were also Mr. Goldsbrough's culling. Being in town at the time our ewes were going through the melting pot, I took advantage of the opportunity to see something of the process, which, as far as slaughtering and pressing was concerned was not an exhilarating spectacle, in the case of our own sheep especially, as many of the ewes were individually known to us and had received particular names. The operation, like shearing, being paid for by the hundred, was very rapidly performed, the dressed appearance being of no importance whatever. The following day, when the meat was set, they were

quartered and thrown into large wooden vats which, when full, had their manholes securely fastened down against the escape of steam which was then let in from a boiler at a somewhat high pressure. After a certain time the meat was completely disintegrated and all the fat dissolved out. The manholes were then opened for cooling down and the liquid fat was drawn out through several taps at different heights; lower taps were opened in succession while the clear, white fat flowed through them and until the gravy appeared, when the flow was stopped; the residue was then emptied out through openings in the bottom and put, minus the bones, into gunny bags and subjected to screw pressure to get the last of the fat squeezed out, the gravy and fat being put into receptacles, with taps, to settle and have the remaining fat drawn off.

The meat residue, void of all its fat, was then conveyed to adjoining yards, where, with the entrails, it formed a fine wallowing mess for a herd of pigs which had no Board of Health to look after them, and which, with the whole of the operations of two or more establishments of the kind, diffused an effluvia that was almost overpowering at a half mile's distance. Such was the process from 1842 to 1850."

The great depression of the 1840s ruined many pioneers and was particularly severe on those in the Port Phillip District who were trying to establish pastoral holdings in the western regions. In the midst of their desperation the solution provided by Henry O'Brien was able to relieve some of the pressure on their finances. Although many pioneers were ruined, the results were not as severe as a complete collapse in the price of sheep would have been. By having a floor price for surplus sheep and cattle there was an assured market for stock if not for the land.

Henry O'Brien stood for the New South Wales Parliament as member for Yass Plains and was elected unopposed in December 1860. He was involved in the passage of the Robertson Land Act, which freed up for selection, some of the land held by squatters.

Henry O'Brien died on 27 January 1866. He was a great pioneer and his innovation saved the fledgling sheep industry of the colonies. Boiling down provided an outlet to get rid of scabby sheep and an incentive to eradicate the disease; it also provided for the sheep breeders an incentive to cull for those who were trying to breed out undesirable characteristics in their sheep. The indomitable Henry O'Brien could only have partly realised what a wonderful boon he was advocating for his compatriots on grazing properties as they faced ruin as sheep and cattle prices fell. However, Captain Wood of the Clyde Company had no illusions "The melting down the stock has been the salvation of the colonies."

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Captain Patrick Wood and others, backed by Messrs. J. and A. Dennistoun of Glasgow had formed their own company for pastoral use of the new country and made Philip Russell a partner. This was the formation of the Clyde Company which was constituted in September and October 1836. George Russell, Philip's brother, was appointed manager.

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