EARLY CONTRIBUTIONS TO THE DEVELOPMENT OF VETERINARY EDUCATION IN SCOTLAND

Alastair A. Macdonald, Colin M. Warwick and W. T. Johnston

INTRODUCTION

It is well recognised that William Dick established the first Veterinary College in Edinburgh in 1823, and there are several accounts which have detailed the development of veterinary education in Scotland throughout the nineteenth century. However, relatively little has been written about veterinary education in Scotland prior to the nineteenth century. In the seventeenth century Edinburgh had witnessed the transfer of the Scottish Royal Court to London in 1603, and in 1707 seen the removal of the Scottish Parliament to London, the Jacobite Rebellion in 1745, the blossoming of the Scottish Enlightenment, and had felt the political and social impacts of the French revolution and the Napoleonic wars. Together, these contributed to significant changes in thought patterns, education and resulting ways of living in the town. Scattered in the archives of national, city and university libraries in Edinburgh there are many traces of these events, and amongst them can be found fragments of evidence of enlightened eighteenth century publications, lectures, proposals and discussions indicating that the topic of veterinary education (in its broadest sense) had been debated in Edinburgh. It is also clear that these conversations had begun more than one hundred years before the 1820s when the first groups of students were enrolled in William Dick’s veterinary school. In this article specific attention is drawn to the contributions made by William Hope, Alexander Monro and his son and grandson, the new School of Medicine in the University of Edinburgh, John Clark and his family, James Jeffray, John Feron, Edward Harrison, The Highland Society and John Barclay.

To assist the reader to locate the sites of the events which took place in the eighteenth century a map of Edinburgh by Kincible (Fig. 1) has been labelled to indicate the locations of the areas which are to be discussed at the appropriate place in the narrative.

THE BEGINNINGS

Formal veterinary education in Europe can be said to have been based on a system of veterinary practice laid down by several Frenchmen, perhaps in
Fig. 1. Map of Edinburgh by Kincaid (1784) highlighting the locations of places mentioned in the text. [Reproduced by kind permission of the Trustees of the National Library of Scotland.]
particular by Jacques de Solleseyel (1617-1680). The 1691 edition of Solleseyel’s famous book, *Parfait Marechal*, was brought to Edinburgh and translated into English by the widely travelled Deputy Governor of Edinburgh Castle, Sir William Hope of Kirkliston (1660-1724). It was printed in Edinburgh in 1696 as a splendid folio edition of 600 pages. Hope supplemented the translation with the work of others, and expressed his wish that farriers could somehow receive a more formal education; he deplored the absence of skilled veterinary practitioners. In 1707 the Scots anatomist James Douglas (1675-1742), who was based in London, published his book on the detailed comparative anatomy of the human and dog. It was also at about this time that the teaching of anatomy in Edinburgh entered a new period. The College of Surgeons reported to Edinburgh Town Council in 1697 that it had completed an Anatomical Theatre where dissections of the human body could be carried out, with access restricted to the regular apprentices and pupils of Surgeons (Fig. 1). The Town Council conferred the title Professor of Anatomy on the Surgeon selected to carry out the dissection. The fourth surgeon appointed as Professor of Anatomy was Alexander Monro, a student of James Douglas.

**ALEXANDER MONRO PRIMUS (1697-1767)**

Alexander Monro (Fig. 2) had studied anatomy during his teen-age years in Edinburgh, and then in 1717 went on a two-year study tour of London, Paris and Leiden to further develop his anatomical knowledge and teaching techniques. While a student in Leiden (1719) he made use of the knowledge gained from Douglas by dissecting several animals for his fellow students to explain the differences between their muscular structure and that of man. Monro returned to Edinburgh in the Autumn of 1719, was examined by the College of Surgeons, passed and was admitted as a member. In 1720 he was proposed to the Town Council as the next Special Teacher in Anatomy, and in 1722, at the age of 25 years, was formally appointed Professor of Anatomy in the University of Edinburgh (Fig. 1). Designated as Monro *primus*, to identify him from his son and grandson of the same name who subsequently followed him in the Chair of Anatomy, he initially gave lectures in the anatomy theatre in the basement of Surgeon’s Hall before moving into the ‘townis college’ (University of Edinburgh) in 1725 where a dissection theatre had been built for him. His anatomical investigations led him to dissect dogs, cows, domestic fowl and fish, and the results of these studies were fed into his detailed comparative anatomy lectures and anatomical museum. He gave lectures to classes that doubled in size, to over 100 young men within ten years. These were students of the University’s Medical School (established in 1726) and the scholars and apprentices of the Surgeons. One of the scholars in his 1737-38 class of 123 students was James Robertson, an apprentice to the
Fig. 2. Portrait of Alexander Monro primus (1697-1767) by Alan Ramsay (1713-1784) Reproduced by kind permission of the National Gallery of Scotland [© National Gallery of Scotland]
surgeon-apothecary John Kennedy.\textsuperscript{22,23} James Robertson was later to become the father-in-law of James Clark (1732-1808), a significant character in the development of veterinary education in Scotland. Monro’s interest in animals extended beyond his study of comparative anatomy, as he made clear in a manuscript autobiography.\textsuperscript{14} In the 1760s Monro \textit{primus} wrote that he had a small estate near Stirling, called Auchinbowie, where he had planned to retire when he reached 60 years of age (1757), and to set aside one day of the week:

‘for the Cure of diseased Cattle, of whom the Farrier’s son was to take Care as also directed by the old Gentleman [Monro himself] – The young Doctors for the human and brute Patients, were to dissect both sound and morbid Bodies of Animals, and were afterwards to be sent to the proper Schools to complete their Education.’

Sadly he fell ill that year, and then ‘some Circumstances of his Family Affairs put a Stop to it [his retirement plan].’

\textbf{JAMES CLARK (1732-1808)}

James Clark was a well educated, enterprising and highly experienced farrier living in Edinburgh. Long regarded as the most significant British contributor to the veterinary literature of the period, he is further characterised as the ‘father of Veterinary Hygiene, not only in this country but in Europe’.\textsuperscript{24}

Little remains known of the details of the first 30 years of Clark’s life. Current opinion is that he was born about 1732.\textsuperscript{4} This was the same year that William Burdon published in Edinburgh:

‘A Farrier is as useful a Trade as any other in His Majesty’s Dominions; we commonly call him Doctor, because he professes Physick and Surgery among Horses; and some are good sensible Men; but People who are able to give their Sons Learning, seldom bind ’em to that Trade; so that Farriers are oblig’d to take such Apprentices as they can get without Regard to their Education. ... Thus many are illiterate, and some totally incapable of Improvement. I have great Compassion for that noble and serviceable Creature a Horse, when I consider how precarious his Life is in the Hands of such Men.’\textsuperscript{25}

We know that in 1758, aged 26, Clark travelled south to London and spent about 11 months working at his trade there.\textsuperscript{3,4} On the 9\textsuperscript{th} of December, 1764, in the Trinity College Kirk, Edinburgh, he married Jean Robertson, a milliner from the Tolbooth Parish of Edinburgh.\textsuperscript{26} She was the daughter of James Robertson,
the medical surgeon at Torryburn, Fife, and his wife Elizabeth née Langlands, the daughter of Robert Langlands, the minister at Elgin. Although no records of any conversations within the Clark family have come to light, it is highly likely that James and his father-in-law shared discussions of a farriery/veterinary nature. Dr Robertson had studied anatomy under Alexander Monro primus, who presented to him detailed lectures on the comparative anatomy of the organs in the abdomen, thorax and neck of the dog and cow.\textsuperscript{15,16,17} It is note-worthy, therefore, that in 1765 Clark in his turn enrolled to attend the equivalent set of anatomy classes given by Alexander Monro secundus,\textsuperscript{27} and may indeed have had some lectures from Monro primus in the new (1764) anatomy theatre which could now hold 300 students.\textsuperscript{28} In fact Clark matriculated in the University of Edinburgh in 1765 and 1766,\textsuperscript{29} and as a student he would have had access to the books in the University’s library as well as those of various other libraries in the town.\textsuperscript{30} For example, he may well have had access, via friends and colleagues, to the very well stocked Advocates Library (Fig. 1), the 1776 catalogue of which listed books of ‘farriery interest’ by H. Bracken, G. L. Le Clerc (Count de Buffon), R. Berenger, S. Hales as well as Sir W. Hope’s translation of Jacques de Solleseyl, among others.\textsuperscript{31,32}

Three years after undertaking his University studies of human and comparative animal anatomy, Clark published his first veterinary text book in 1770, and the craftsman’s skill evident within it attracted attention.\textsuperscript{33} Within five years a much expanded edition of this book was published (the page numbers had increased from 62 to 203) which gave a detailed account of the diseases of the horse’s foot; Clark donated a copy to Edinburgh University Library.\textsuperscript{34} Both books entered the catalogue of the Advocates Library between 1776 and 1787.\textsuperscript{35} The text of the expanded edition was published again in 1782 as the third edition.\textsuperscript{36}

In 1771 Clark established a ‘Livery Stables and Repository for Horses’ at the head of the South Back of Canongate (Fig. 1).\textsuperscript{37,38} This was situated outside the city wall, due north-east of Surgeon’s Hall. Four years later, in 1775 he announced:\textsuperscript{39}

‘Mr Clark takes the opportunity of acknowledging the obligations he lies under to the public, for the encouragement he has met with in his Livery Stables and Repository; hopes the continuance of their favours, and begs leave to acquaint them, that for the better accommodation of Horses and Carriages he has taken that LARGE AREA of GROUND adjoining to his Stable Yard (formerly used as a Brewerie [by Robert Chambers]\textsuperscript{40}) in which he has now fitted up a number of elegant Stables and Shades for Carriages. The Area of the Stable Yard consists of 212 feet in length and 70 in breadth, on which he proposes
to erect a shade or ride for exercising Horses in wet weather. The Stable Yard is supplied with plenty of fine soft water. The whole, when completed, according to the plan now carrying on, will make one of the largest and most commodious Stables in this country, or perhaps in any other part of Great Britain. Mr Clark proposes to have a SALE of HORSES by Auction on Wednesday the 16th curt. Between twelve and one noon and for the future, he will have a SALE on the first Wednesday of every Month.'

Fifty two ‘stablers’ were listed in the 1775 Directory (two stablers in Leith), which gives some measure of the population of horses coming into the town at that time. The same Directory listed James Clark as a ferrier [farrier] in the South Back of the Canongate, Peter Clark as a ferrier in Toderick’s Wynd in the Cowgate and James Thomson as a ferrier in Broughton. Although George Christie at the Pleasance was the only listed Blacksmith, an additional 61 men were included as ‘smiths’ (with eight in Leith). There is good evidence from other sources, such as the Register of Marriages, that a number of these and other younger men were also considered farriers or blacksmiths. Clark’s good reputation was such that on January 31st 1776 he was appointed, and on 25th September that year registered, as Farrier to His Majesty in Scotland [George III].

ALEXANDER MONRO secundus (1733-1817)

During this period in Clark’s life there had been a substantial increase in the reputation of the University of Edinburgh’s Medical School and Monro primus had been succeeded to the Chair in Anatomy in 1754 by his son, Alexander Monro secundus. Like his father, Monro secundus first spent time abroad, in London, Leiden, Paris and Berlin, furthering his anatomical knowledge and research skills, before returning to Edinburgh is 1758 to teach (Fig. 3). He continued the development of his father’s lectures on human and comparative anatomy and presented these to ever-increasing numbers of students. In 1775 Douglas’s book on comparative anatomy (human and dog) was republished in Edinburgh. In 1781 Monro secundus published the ‘Treatise on Comparative Anatomy’ as part of his father’s complete works, and two years later published an extended and revised version of this Comparative Anatomy. Perhaps in part inspired by Douglas’ book, this revised version now contained, in addition to the previous twenty-nine pages on dog anatomy, a detailed eighteen-page description of the musculature of the dog, together with the following explanation in a footnote to the Introduction:
Fig. 3. Drawing [1790] of Alexander Monro secundus (1733-1817) by John Kay (1742-1826) [Courtesy of Sheila Szatkowski, Edinburgh]
'The myology of animals seems exceedingly necessary for young anatomists, who generally begin with dissecting them before they have access to human bodies. For this reason, we have added, not indeed a complete myology, but an account of the particulars wherein the muscles of a dog differ from those of man; this being the animal most frequently chosen for dissections, and one of those whose structure bears no small resemblance to that of the human species.'

That year James Clark’s eldest son, James, matriculated in the University of Edinburgh\textsuperscript{45} and enrolled in the anatomy classes given by Monro \textit{secundus}. He enrolled for classes again during the 1782-83 session.

\textbf{JAMES JEFFRAY (1759-1848)}

Another of the 328 students who enrolled in the 1782-83 Anatomy classes by Monro \textit{secundus} was James Jeffray (Fig. 4).\textsuperscript{45} Christened on the 15\textsuperscript{th} May 1759, the eldest son of John Jeffray, a merchant in Kilsyth, and Agnes née Buchanan,\textsuperscript{46} James Jeffray went to Glasgow University in 1772 and followed the five year course to obtain his MA degree in 1778.\textsuperscript{47} He came to Edinburgh to study Medicine at the University in 1782\textsuperscript{45} and is listed as attending the 1783-84 classes in Natural History given by John Walker and the 1784-85 lectures in Botany by John Hope.\textsuperscript{48,49} The other Medical School teachers who taught in the vernacular included William Cullen on the Practice of Medicine, Joseph Black on Chemistry and Medicine, Francis Home on Dietetics, Materia Medica and Pharmacy, James Gregory on the Institutions of Medicine and Alexander Hamilton on Obstetrics and Midwifery. On November 30\textsuperscript{th} 1782 Jeffray was accepted as a member of the Medical Society of Edinburgh, a student society established in 1737 which not only had an active programme of lectures and debates but also had its own library.\textsuperscript{50} Jeffray was elected one of the four annual presidents of that society for 1784-85. On February 13\textsuperscript{th} 1783 he joined the newly formed Natural History Society of Edinburgh.\textsuperscript{51} Jeffray presented two essays to this society, ‘Observations on the Placenta’ on the 22\textsuperscript{nd} of May 1783 and ‘On the analogy that subsists between animals and vegetables’ on the 11\textsuperscript{th} of March 1784; these titles are indicative of the range of subjects selected by the medical students for presentation.\textsuperscript{52} He was elected one of the four presidents of the Natural History Society of Edinburgh on the 2\textsuperscript{nd} of December 1784. In 1786 (aged 27) he submitted his thesis and graduated MD.\textsuperscript{53}

That same year he released his first publication, \textit{An address to the public, on the present state of farriery.}\textsuperscript{54} This document is interesting and pertinent from a number of points of view. Firstly it reveals how politically well connected Jeffray appears to have been; he described himself as ‘Farrier to his Royal
Fig. 4. James Jeffrey (1759-1848) from a Thomas Annan (1829-1887) photograph of a portrait by John Graham-Gilbert (1794-1866) [Reproduced by kind permission of The Mitchell Library, Glasgow © The Mitchell Library, Glasgow]
Highness the Prince of Wales for Scotland’ (Prince George Augustus Frederick, the future George IV), a link that may have been achieved through his connections with Andrew Duncan, the editor of Medical Commentaries, then the only medical journal in Britain, and recently appointed Physician to the Prince of Wales for Scotland.⁵⁵ Secondly, Jeffray seems to be directing his writing to the Prince, and thereafter to a horse-owning readership based more in England rather than in Scotland. Thirdly, he states that he has gained experience of horse dissection during the preceding three years and has had access to books on Farriery by Snape, Gibson, Bourgelat, La Fosse as well as those from the European veterinary schools.⁵⁴

He wrote,

‘Farriery must be studied, not as a system of empyricism, consisting of complex, inelegant recipes, and jarring contradictory facts; but as a branch of Medicine, and on a Scientific plan.’ ... ‘A scientific knowledge of Anatomy, of the phænomena and causes of diseases, together with an accurate acquaintance with the operation of remedies, so essentially necessary in Medicine, is equally useful and necessary in Farriery; and, that acquaintance with the structure, diseases, and remedies of other animals, particularly of man, added to the stock of knowledge to be acquired in a stable, will make a blacksmith, or a groom, a better farrier, however qualified he might have been.’

He went on to argue:

‘At present every one who wishes to acquire a superior knowledge of this art, must either dissect alone, and read over the innumerable and voluminous authors, who have written on the subject, without having any one to assist him in clearing away the rubbish, and condensing their scattered facts; or, he must go to Paris or Lyons, and study in the Veterinary Schools. In these seminaries, founded and endowed by the Crown, Professors are appointed to lecture on the anatomy and physiology of horses; on their diseases, and the medicines employed in their cure. And there are extensive stables for horses labouring under every kind of disease, where the student has it in his power to see the truth or fallacy of what he reads, or hears, fully established or overthrown, by an immediate and candid appeal to practice. Pupils have been sent almost from every court in Europe: that of Britain as yet has sent none [our emphasis].’
Jeffray goes on to explain that:

‘This can only be done by the institution of an Academy, on a plan somewhat similar to that of the [French] Veterinary Schools.’ … ‘There the first object must be, To demonstrate the structure of the Horse, and to point out the nature, the causes, and the seat of his various disorders; the second, To ascertain the effects of medicines on him, and the peculiarities of his constitution.’ … ‘To accomplish the first of these ends, a proper place must be fitted up for dissection, demonstration, and preserving preparations, to shew the structure of his different parts in health, and their derangement in disease. As for the last, it is impossible it can be effected, except the horses be continually under the eye of the Mareschall, and entrusted to his people alone; which renders the erection of Stables, or an Infirmary, absolutely necessary.’

Jeffray did not hide his opinion that ‘a considerable expense must be incurred before this plan can be executed in its full extent’. Later that year he followed up his published Address with the publication of a set of proposals for carrying out his plan.56 This document emphasised that in addition to having studied the subject for the last three years:

‘… he has studied and compared most of the publications on it; he has examined the structure of the horses, by careful dissection; he has improved [learned from] every opportunity that offered, of observing the diseases of Horses, with the effects produced on them by Medical remedies and operations.’

His [farriery] studies in Edinburgh had been unassisted and so he indicated that he intended to spend the ‘two following years in attending the Veterinary Academies on the Continent.’ Before embarking on this scheme he was looking for sponsors willing to take the risk of supporting him. The spendthrift Prince George does not seem to have been persuaded to provide the necessary funding to his ‘Farrier in Scotland’. Local Scottish financiers similarly do not seem to have been attracted to sponsor him, perhaps because of his statement that following his studies in France, he would found the veterinary school in London. In 1787 he set off for the continent for other reasons.57

FURTHER PROPOSALS FOR VETERINARY EDUCATION

It must be realised that in the 1780s hundreds of young men were coming to Edinburgh each year for a medical education. As a consequence they were
receiving lectures and dissection experience of comparative anatomy as well as participating in discussions of comparative biology as part of their training. Books on these and related medical subjects were being published regularly in the town.\textsuperscript{17,43,44,55} James Clark’s new book on veterinary hygiene was published in 1788.\textsuperscript{58} In the preface he too regrets that:

‘A regular mode of education [in farriery] is not to be attained on any terms, at least in this country. In France, a regular academy [Lyon in 1761 & Alfort in 1765] for the instruction of young farriers has been instituted. The attempt is laudable, and worthy of imitation’.

He also goes on to say that Professors of Anatomy, Materia Medica and the Practice of Physic should be available for those anxious to study the diseases of animals; nothing is at present available to them but reading, and this ‘is not sufficient to qualify a man either for the profession of physician or farrier’. It is clear that these thoughts had been circulating in Edinburgh. They were also being discussed within the Clark household; in January 1790 his second son, John, during his interview to be accepted as a pupil at the School of Design in Edinburgh, put forward the proposal ‘to institute a Veterinarian School in Scotland’.\textsuperscript{3} On the 5\textsuperscript{th} October of that year James Clark wrote to the Odiham Agricultural Society (~60km south-east of London), England with ‘a proposal for establishing a veterinarian School in Edinburgh’. This, however, arrived some time after the detailed proposal to found a veterinary school more close by, in London, submitted by Charles Vial, had been accepted by the Society, and so Clark’s proposal was unsuccessful.\textsuperscript{3} The London Veterinary School was established in 1791 with Benoit Charles Marie Vial (Saint Bel) as the College’s first Principal.\textsuperscript{59,60}

Clark pressed on. In 1793 and 1794 he prepared lectures ‘on the prospect of a Veterinary School being established at Edinburgh, under the direction of the Author.\textsuperscript{61} He wrote:

‘This school was to have been patronized by some of the first noblemen and gentlemen of the country; and, at the same time, the Author had the fullest assurance of the countenance of Government for its aid and support. For which reason, he declined the offer then made to him by the Directors of the Veterinary College at London, of standing as a candidate for the vacant Professorship, following the death of M. St Bel their first Professor.'\textsuperscript{61}

It is possible that Clark’s comments may have referred in part to Sir John Sinclair (1754-1835), who between 1791 and 1799 published the 21 volume
Statistical Account of Scotland and who in 1793 had been made President of the newly formed British Board or Society for the Encouragement of Agriculture and Internal improvement (Fig. 5). Clark’s preference for Scotland was because he:

‘... anticipated the many advantages that would be derived from an institution of this kind in Edinburgh, from its vicinity to an University so justly famed for the celebrity of its medical and surgical Professors, and attended by a numerous concourse of Medical Students from all parts of Europe; that whilst many of them were attending other branches of medical education, some might be induced to attend the Veterinary Class. The many advantages arising to the science from this circumstance alone, of being studied by men who had the advantage of a liberal education, would have been the surest means of improving the art, and of disseminating veterinary knowledge throughout the kingdom in a highly improved state. Another circumstance of equal importance attending a Veterinary School at Edinburgh is, that young men who propose to follow the operative branch of shoeing horses, and indeed mechanics in general, get a better or more liberal education in this country, than their more southern brethren of the same professions in England.’

Clark was a fairly wealthy man by this time, and for the preceding 20 years had been a bold entrepreneur in Edinburgh. He may have had thoughts of creating the veterinary college from his own resources. However, various circumstances militated against this course of action. He was now over 60 years old. No doubt he was aware of the 1778 attempt by Edward Snape, Farrier to George III in England, to establish in Knightsbridge, London, a Hippiatric Infirmary for the instruction of pupils in the profession; and of its collapse when backers failed to shoulder some of the financial burden. He was also well aware of the troubled early years of the new London College. The political situation in Britain, as a consequence of the 1789 revolution in France, certainly played a role.

JOHN FERON (fl 1754-1824) [JEAN FÉRON]

The French Revolution brought into Edinburgh the next contributor to the discussion on Veterinary Education in the town, in the form of a French Royalist refugee. John Feron [Jean Féron] was born about 1754, and according to his own account was a military man first (Regiment of Carabineers) before becoming ‘equerrer’ and public demonstrator of equine anatomy in Nantes, Bretagne from 1779-1789. He said that he had been encouraged by ‘Monsieur
de S. Bell' to go with him to England 'to second him in his undertaking of a Veterinary College in London, which I could not refuse, on account of the long friendship that had subsisted between us'. Interestingly, Feron's claim that he 'had the honour of being named Second Professor [of the London School], charged with the general care of the Infirmary, &c' is not evident in the histories of the London Veterinary College.  

Feron said that three months after the death of 'Monsieur de St Bell' (on the 21st August 1793) he left London, and came to Edinburgh via Dublin. Sometime in 1794 or 1795 Feron reportedly gave a public lecture on the veterinary art to an audience in Edinburgh, and it is possible that James Clark attended this lecture; the event may indeed have further stimulated Clark to continue with his writing. The account of the lecture, which was published in 1796, contained a list of 30 subscribers to Feron's proposed veterinary institution. How many of these may have been the same people that had supported Clark is not yet clear. At about this time (1794) the Directory listed seven 'ferriers' for Edinburgh, and an additional one for Leith; James Clark was listed as a 'coach hyrer'. In the same lists there were fifty-three 'smiths' and sixty-one 'stablers' in Edinburgh (Fig. 1), with eight smiths and five stablers in neighbouring Leith. 

On the 28th of April 1796 Feron advertised that he had 'Fitted up a FORGE and Opened an INFIRMARY for the reception of SICK or LAME HORSES' in former stable premises under the North Bridge in Edinburgh. In June he advertised that he was going to give a course of lectures on farriery in July, and these were specified in a further advertisement on the 16th July.

FARRIERY

M. FERON, Professor of VETERINARY MEDICINE, respectfully informs the Nobility and Gentry, That his proposed COURSE of LECTURES will begin on Tuesday next the 19th curt. at Two o'clock, in Bernard's Rooms, Thistle-street; when he will deliver his First Lecture, containing a General Description of the Horse; with various Remarks on the Geometrical Proportions of the Race and other kinds of Horses.
LECTURE 2d, on Wednesday,
Containing a particular description of the Horse's Foot, externally and internally, &c.
LECTURE 3d, on Thursday,
Of the Position of the Foot upon the Ground, and of the Concave Form of the Lower Surface of the Foot, considered in respect to Shoeing.
LECTURE 4th, on Friday the 22d,
On Paring the Hoof, Accidents resulting from the unskilful performance of that operation, and on Shoeing the Good, the Flat, and the Convex Foot.
Admittance to the whole Course, One Guinea – to a Single Lecture, Seven Shillings.
Tickets may be had of Mr FERON, at his INFIRMARY, under the North Bridge, where he continues to admit LAME or SICK HORSES, not affected with any contagious [sic] disorder, using the most effectual means for their speedy and perfect cure.
EDINR. July 14, 1796.

In addition, during the summer of 1796, he worked as a farrier with the cavalry at West Barns, East Lothian, under the command of Major General Sir James Stewart.69,70 He gave his course of farriery lectures to the troops there, the first such series of lectures in Scotland. The next we know of his movements is that he went to London on business in the autumn, and on his return to Edinburgh in 1797 published the prospectus for his Edinburgh Veterinary School entitled Veterinary Institution (see Appendix I).70 In this he indicated that he was now ‘ready to receive Pupils, in order to teach the Anatomy of the Horse, and the Veterinary Medicine’. He set his fees and outlined a programme of study, with the study of the horse beginning in May and ending in October, and the study of anatomy and the ‘animal economy’ beginning in November and ending in April of the following year. In addition, a series of 14 public lectures on the anatomy and diseases of the horse were offered at the cost of 1 guinea, with tickets to be obtained from him in Edinburgh. However, nothing seems to have come of this. He returned to London and in 1799 attended the short three to four month long course at the same London Veterinary College in which he said he had taught some eight years earlier; he obtained his diploma on October 12th 1799.71 Within days, on the 24th October 1799, at the age of 45, he enlisted as a veterinary surgeon with the 13th Regiment of the Light Dragoons.72 James Clark, meanwhile, continued writing his lectures on veterinary physiology in Edinburgh. He lived out the last years of his life in his home near Comely Gardens at the east end of Canongate. He died there, aged 76 on the 29th July 1808, and was buried in the Canongate cemetery, Edinburgh (Fig. 1).3,4

EDWARD HARRISON (1766-1838)

Discussion of veterinary education in Edinburgh appears to have been somewhat muted during the Napoleonic war years between 1798 and 1810. Nevertheless, thought was being given to post-war improvements in animal (and human) medical care. Edward Harrison (1766-1838) had been trained in Edinburgh University’s Medical School at the time that James Clark junior and James Jeffray were students there. In 1810 he published in Edinburgh copies of
his sketch of a bill: 'for the improvements of the medical and surgical and veterinary sciences and for regulating the practice thereof'; copies were also circulating in England.\textsuperscript{73} This was a far-sighted proposal to regulate the medical and veterinary professions, and was a long way ahead of its time. He wrote:

(that it is expedient that provision should be made, as well for regulating the practice of the medical and surgical and veterinary sciences, as for promoting the due education of practitioners in the different branches ... a register to be kept for that purpose, [recording] his or her Christian and surname and place of abode ... and ... a certificate shall be given to every person so registered of the capacity or capacities to practice. Every person practicing as a ... veterinary practitioner ... shall annually ... take out a certificate and that ... all sums of money so to be raised for such registering and certificates ... shall go and be applied ... to promote the improvement of the medical and surgical and veterinary sciences, and the education of the practitioners."

It would be over thirty years before these ideas matured to fruition with regard to veterinary education and the registration of its practitioners. However, these thoughts kept the topic alive in Edinburgh. The forum that was critical to the future development of these considerations was the Highland Society of Scotland.

**THE HIGHLAND SOCIETY (1784-PRESENT)**

The Highland Society of Edinburgh had been established in 1784 and three years later it received its first Royal Charter as 'The Highland Society of Scotland at Edinburgh'. It had been formed by the 'great and the good' with John, the 5\textsuperscript{th} Duke of Argyle as its first President, Sir John Sinclair (1754-1835, Fig. 5) a founding and very active member in its early years and Monro secundus as another founding member.\textsuperscript{74,75} The original objects of the Society included the improvement of the Highlands and Islands of Scotland and the conditions of their inhabitants, an enquiry into the means of their improvement by establishing towns and villages – facilitating communications by roads and bridges – advancing agriculture – extending fisheries – introducing useful trades and manufactures, and the preservation of the language, poetry and music of the Highlands. The Society's agricultural interests date from 1785 when medals for essays on agricultural subjects were first offered. In 1790 the Chair of Agriculture in the University of Edinburgh was founded on the Society's initiative. Sir John Sinclair's *Statistical Account of Scotland* established the bases for the Society's considerations of further development throughout
Fig. 5. Sir John Sinclair (1754-1835) by Sir Henry Raeburn (1756-1823)
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Scotland. In 1803 two essays on the diseases of black cattle were published by the Society. As a direct result of these, the Society established a prize essay competition to gather comparable information on the diseases of sheep. In 1807 the 13 essays submitted were synthesised into a 196-page treatise on the subject.

On the 28th August 1816 the Lord Provost of Edinburgh, Sir William Arbuthnot (also a member of the Highland Society) moved in the Town Council of Edinburgh:

‘... that in order to maintain the high reputation and consequence of the University of Edinburgh, a committee be appointed to consider the propriety and necessity of the Patrons instituting a Chair for Comparative Anatomy and Veterinary Physic and Surgery on a scale similar to that of the celebrated Cuvier at Paris.’

The Magistrates and Council approved, and a report was prepared the following day. The discussions that then took place within the University and between the University and the Town Council have been examined in some detail in a recent publication. John Barclay (1758-1826), who had been tipped for the post, was a man of brilliance, vision and charm. However, he taught anatomy privately and very successfully outside the University, at 10 Surgeon Square. Professor Alexander Monro tertius (1773-1859) was less successful as a teacher of anatomy, and both he and other professors were very anxious about the impact that this new professorship would have on their subject ‘territories’ and future income. What may also have contributed to the decision was the timing of the suggestion. It arrived just as the members of the Senatus were preoccupied with the last stages of their judging of the competition for the design of the College buildings; it was not easy to see where accommodation for Veterinary Physic and Surgery might have been fitted into Playfair’s plan for the college site. On 11th December 1816, the Chair Committee of Edinburgh Town Council, although it argued fluently against the report from the University, also stated that:

‘... we will conceive it our duty at all times to endeavour as far as we are able to promote the establishment ... [of] ... a separate School of veterinary medicine connecting it with an hospital for sick animals and a Forge.’

The chair was not established. John Barclay, although denied the opportunity to become the first Professor of Comparative Anatomy and Veterinary Physic and
Surgery in the University of Edinburgh, contributed significantly to the next steps.

JOHN BARCLAY (1758-1826)

John Barclay (Fig. 6) was a Director of the Highland Society of Scotland. It was at about this time that William Dick (1793-1866), a young farrier born in Edinburgh, began to come, with a medical acquaintance, to John Barclay's lectures in his school of anatomy. Dick was the second child, first son of John Dick and his wife Jean. William Dick had been raised in the Canongate and his farrier father was probably well known to James Clark. William was quickly spotted by Barclay as the brightest among his many students. He saw within the youth a character with native intelligence, farriery skills and ambition, the very person to catch the moment. Barclay encouraged and mentored him. The Dick family setting was also propitious. In 1815 the foresighted John Dick had moved his family into the rapidly developing New Town of Edinburgh. There he had secured a forge in the stable courtyard behind numbers 8 & 10 Clyde Street, conveniently situated diagonally across the road from their home at number 15 (Fig. 1).

In the autumn of 1817, at the age of 24, William Dick took the stagecoach south to London to attend the lectures of Professor Edward Coleman at the Veterinary College in Camden. At the end of the three month period of study, Dick was examined and received his diploma on Tuesday, 27\textsuperscript{th} January 1818. This short time was well spent as he had gained an insight into the working of an established veterinary college. Later that year Dr Barclay recommended him to Mr Scott of Parton who was establishing an academical institution in Edinburgh in which, among other sciences, veterinary surgery was intended to be taught. No students enrolled that year, but in 1819 four students attended, although only one came regularly to hear Dick's daily lecture. In 1820 nine students attended his one-month long series of free lectures; on each of the following two years, 'a numerous class' attended his lectures.

On the 21\textsuperscript{st} May 1823 John Barclay again stepped in. At a meeting of the Directors of the Highland Society of Scotland a letter from Mr Robert Johnston, a merchant in Edinburgh, stimulated discussion of the importance of having a Professorship or public lecturer giving instruction on Veterinary Surgery in Scotland. A committee, with Dr Barclay as its Convener, was formed to consider the matter, and on the 30\textsuperscript{th} of June that year reported favourably. At the General Meeting of the Highland Society one week later a sum not exceeding £50 was placed at the disposal of the Directors to promote 'public instruction in the ensuing season, in the Veterinary art and the diseases of
Fig. 6. John Barclay (1758-1826)
[From O. Charnock Bradley. History of the Edinburgh Veterinary College, Edinburgh, Oliver and Boyd, 1923, facing p. 14]
livestock. Again one week later, the Directors of the Highland Society and their Committee identified in William Dick:

‘... a practical man, a graduate of the Veterinary College of London, ready to undertake the duty of delivering suitable lectures, and to provide the necessary accommodation, on receiving the countenance and patronage of the Society’.

William Dick, now 30 years old, delivered his first lecture of the series in the evening of Monday, 24 November 1823. Twenty five farriers and smiths attended as well as various interested ‘general or amateur’ students, medical men and members of the Highland Society’s committee (The Directory for 1821 listed four veterinary surgeons, seven farriers, 21 stablers and 66 smiths in Edinburgh, and two farriers, two stablers and 12 smiths in Leith). Forty six lectures were given, on Monday and Thursday evenings, spread over the following 23 weeks, concluding in April 1824. The material covered the anatomy and diseases of horses, cattle, sheep, pigs and dogs, a range far wider than that attempted by the London School, and one which better fitted the requirements of the Scottish economy. He gave practical instruction at his father’s forge in Clyde Street. New students were charged two guineas; former students were charged one guinea for the course. In July 1825 Barclay again contributed by suggesting that various medical men would be willing to examine the students at the end of the course.

CONCLUSIONS

We have drawn a thread through many small and large fragments of information that have lain scattered, un-noticed, disconnected, forgotten in the archives and libraries of Edinburgh and beyond. These show that there was an awareness of the need for veterinary education in Scotland for over 100 years before it came about. The assembly of the essential political, financial and personality ingredients for the success of such a project took time. There is also perhaps a certain touch of irony, when the reader notices today that this paper comes from the College of Medicine and Veterinary Medicine in The University of Edinburgh. In 1833, when William Dick constructed his independent, purpose-designed Veterinary College building in Clyde Street its foundations were built on land sold to him by Alexander Monro tertius, the grandson of Monro primus, the medic who learned dog anatomy from the Scots anatomist James Douglas over a century earlier, and who then taught dog anatomy to medical students, first in Leiden and then Edinburgh.
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APPENDIX I

TEXT OF JOHN FERON’S VETERINARY INSTITUTION

VETERINARY INSTITUTION

MR FERON respectfully informs the Subscribers of the VETERINARY INSTITUTION of Edinburgh, and the Public at large, that he has now returned from London, where some important business had compelled him to go; the most essential of which was, to pass his Examination before the Medical Committee of that Capital. This step was of the highest importance, for two reasons: First, in order to enable him effectually to resist the force of that inveterate Prejudice, which prevails among a crowd of interested and opini[on]ated Men. And secondly, to provide himself with an ample character of Probity and Professional Skill, before he could be honoured with the confidence of so great and respectable Society. If he shall again be so fortunate as to meet with the Encouragement and Patronage of his Subscribers, and the Public in general, he will prove, to every unprejudiced mind, what obstacles may be overcome by Industry and Perseverance; and that, in this Country, the utility and benevolence of the above Institution, need only to be perfectly understood to meet with due attention and encouragement: The task which his present situation imposes on him is great, but he shall exert all his abilities to fulfil it; and if the Society, who honour him with their Confidence, shall continue their Patronage, his efforts, to render himself useful in his station, shall correspond with their candour and generosity.
MR FERON begs leave to inform the Subscribers of the Veterinary Institution, that he is ready to receive Pupils, in order to teach the ANATOMY of the HORSE, and the Veterinary Medicine, on the following conditions, viz: FIFTEEN GUINEAS for educating a Pupil during Three Years. TEN GUINEAS for one Year. And TWO GUINEAS for one Month only. Any Subscriber of the Veterinary Institution of Edinburgh shall have the privilege of recommending one Pupil to be instructed at Half the above Rates.

The particular Study of Pupils shall be nearly as follows: First, The study of the Exterior Knowledge of the Horse shall begin in May, and end in October. In this course, the Pupils will be taught the Good and Bad Conformation of the Animal, and the External Diseases which affect his Body and Limbs. This will employ them in the Morning only. In the Evening, they will be instructed in the Materia Medica, and in the different kinds of Plants and Herbs in use in Veterinary Medicine. The study of Anatomy or Zootomy, and the Animal Economy, shall begin in November, and end in April the following year.

It being necessary that the Shoeing of Horses should be perfectly understood, the Pupils shall attend the Forge in the morning; in the evening, Lectures will be given in Pathology, to prepare them for the practice of the Infirmary, and in the practice of those Surgical operations which they shall have been taught in the preceding Course of Lectures. Several kinds of Animals shall be kept in the Veterinary Institution for that purpose.

MR FERON also begs leave to inform the Subscribers, and the Public at large, that he will begin to read the following Course of Lectures, by Subscription, as soon as possible; of which proper notice shall be inserted in the Newspapers.

LECTURE I. On the external Proportions of the Horse, relative to the Use he shall be intended for.
LECTURE II. Containing the external and internal Anatomical Description of the Foot.
LECTURE III. Upon shoeing Horses, paring the Hoof, the accidents resulting from the unskilful performance of this operation; and shoeing good, flat, and convex feet.
LECTURE IV. On the natural and accidental Diseases of the Foot: viz. running thrush, bleim, sand-crack, horny quiter, and canker; their symptoms and cure.
LECTURE V. On Foundering; the method of distinguishing its different degrees of inflammation, and its cure.
LECTURE VI. On the Sprain and Rupture of the back-sinews, the fracture of the bone of the coronet, the navicular bone, and the bone of the Foot, &c.; their different symptoms and cure.

LECTURE VII. Containing a full description of the Grease, or watery sores in the legs of Horses; their different symptoms and cure.

LECTURE VIII. On the Anatomical description of the Farcy and Glanders; their different symptoms, and causes by which these two cases are produced, by a short description of the nose, and pituitary membrane; the real proper method of proceeding in the cure of each species; with several experiments made by Mr Feron at West Barn Camp, last Summer 1796.

LECTURE IX. On the different kinds of Cholic or Gripes, and the best scientific treatment adapted to each species.

LECTURE X. On the Heart, and the Circulation of the Blood, in order to render the inflammatory cases more easily to be understood

LECTURE XI. Containing a description of the inflammatory diseases; first, on the Fever, Lock-jaw, violent Cold; their symptoms and cure.

LECTURE XII. Containing that mistaken disease among Farriers called Chest-foundering, Pleurisy, and Peripneumony; their different symptoms and cures.

LECTURE XIII. On the Inflammation of the Kidneys, and Bladders; Worms in the stomach, and in the intestines; their different kinds, and proper method of proceeding in the different symptoms; and cure of each different case.

LECTURE XIV. On the Anatomy of the Eye, and the different diseases to which that organ is subject to; such as the inflammation of the conjunctive membrane; the obstruction of the aqueous humour of the eyes (called among Farriers, &c. moon-eyes;) and opacity of the chrysaline humour, termed catharact; their different symptoms and cure.

Admission to the Fourteen Lectures in ONE GUINEA, and THREE SHILLINGS for admittance to one Lecture only. Tickets to be had at Mr Feron, St Anne Street, North Bridge, Edinburgh.

All the before-mentioned Lectures will also be published by Subscription, with the addition of a very great number of curious Prescriptions, used with great Success in obstinate cases in diseases of Horses, &c.

Edinburgh, February 3d 1797.

I HEREBY certify, that Mr FERON was employed under my Command during the Summer 1796, at the Camp of West Barns, and had the superintendence of a very large Infirmary, established there for the treatment of Sick Horses belonging to the Cavalry Regiment: and that, in the discharge of
that important duty he discovered very superior skill in the Veterinary Art: The Lectures he read during that period, were, as far as I can judge, extremely curious and instructive; and I am firmly of opinion, that his being encouraged to remain and establish himself in Scotland, would be of very essential advantage to the Country at large. His knowledge in Shoeing, and in the treatment of Horses feet, is admirable.

(SIGNED,) JAMES STEWART, D.
(BART. OF COLTNESS.)
Major General.

Addressed to:
Honourable Mr Ramsay Maule
Esqr. of Panmure
[Seat of Earl of Dalhousie]

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Authors’ addresses:

Alastair A. Macdonald, BSc, PhD, Dr, MBA, FHEA, and Colin M. Warwick, MBE, Veterinary Biomedical Sciences, The Royal (Dick) School of Veterinary Studies, The University of Edinburgh, Summerhall, Edinburgh EH9 1QH. W.T. Johnston, Officina, 11 Anderson Green, Livingston, West Lothian, EH54 8PW.

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DEMISE OF THE DINOSAUR CREATED MAMMOTHS

According to one of the most extensive surveys of the fossil record, mammals would have remained no bigger than mice if the dinosaurs had not died out. Mammals were limited in size to between about 3 grams and 15 kilograms for the first 140 million years of their evolutionary history but after the extinction of the dinosaurs 65 million years ago they rapidly increased in weight to a maximum of 17 tonnes (such as ‘Indricotherium transouralicum’ – a hornless rhinoceros-like herbivore). When the dinosaurs disappeared there was basically nobody else eating the vegetation; it’s more efficient being an herbivore when you’re big. The survey suggests that the global ecosystem is able to re-balance itself within 25 million years; geologically speaking this is rapid evolution. Species can quickly grow to fill ecological niches.