The Genesis
Origins and Early History of the Veterinary Profession

An historical account of the evolution of a veterinary school would be incomplete without some consideration of its professional and academic heritage. In this chapter the origins and early history of the veterinary profession will be discussed briefly. Some major examples will be cited to establish the place of the profession at various times in its evolution. In doing so, it is necessary to review development of the natural sciences and medicine. At times, the sciences were highly regarded, while at other points in history, they were smothered by religious dogma, superstition, and social revolutions. In most, but not all, cases veterinary medicine followed this trend.

*Early Egyptian scene — delivery of a calf.*
(From: Smithcors, Evolution of the Veterinary Art.)
References to the practice of veterinary medicine are found in the oldest records of civilization. The Babylonian Code of Hammurabi (c. 2,000 B.C.) clearly stated the tasks of the "doctors of oxen and asses" and specified the fees which could be collected. The oldest written record of veterinary procedures is contained in the Egyptian papyrus of Kahun (c. 1,900 B.C.), a long medical treatise with a veterinary section. Surviving fragments show three incomplete prescriptions for animals. This inclusion of veterinary matter in the medical treatise indicates that veterinary medicine was highly regarded at that time.

The most complete early writings about veterinary medicine survive from the Vedic period of India (c. 2,000 to 1,800 B.C.). These documents show the high esteem the ancient Hindus had for animal life and indicate that veterinary medicine flourished along with human medicine. There existed specialization in practice, a high level of professional ethics, and laws regulating veterinary services. The most celebrated veterinarian was Salihotra. For centuries, in deference to his reputation, veterinary practitioners were designated as Salihotria. Later, about 250 B.C., during the reign of King Asuka, the first permanent veterinary hospitals were built in India. Today remnants of these hospitals as well as the edicts of Asuka, relating to the treatment of animals, survive.

Records of veterinary medicine in early Western Civilization are scant. Medicine flourished in ancient Greece. By the sixth century B.C., when speculative philosophy developed, medicine had moved from the realm of magic and mysticism to the scientific. Diseases and their causes were studied and described, and the structures of organisms were investigated. The philosopher Anaxagoras (c. 500 — 430 B.C.) dissected animals, and Alcmaeon of Croton (c. 500 B.C.), another philosopher, described the optic nerve and the auditory tubes, and he regarded the brain as the seat of intellect and senses.

Hippocrates (c. 460 — 357 B.C.) gave Greek medicine its scientific spirit. He practiced direct clinical observation and used a logical approach to diseases. His therapy was based on cooperation with nature. On these foundations learning and research in medicine continued and advanced in Greece. Later this was continued by Greek physicians in the Roman Empire until the advent of Christiananity when mysticism, superstition, and dogmatism once again took hold in medicine, displacing the scientific spirit.

As medicine developed in Greece and Rome, so did veterinary medicine, though it concentrated on the horse. Practitioners in ancient Greece were referred to as hippiatrioi and the Romans called them equarius medicus (doctor of horses). Later the doctor of animals was designated as veterinarius, from the Latin word veterinus, pertaining to beasts of burden as oxen were the principal draft animals of the time. From this comes today's noun veterinarian.

The horse was an important animal. It provided transport for the invading Roman armies. Veterinarians accompanied the cavalry and conducted a high level of practice as they traveled with the armies in Asia Minor (Byzantium) during the late Roman Empire (c. A.D. 300 — 500). During this time, historians have conceded, veterinary medicine forged ahead of medicine, and the classic work Hippiatrika, a book about the diseases of horses, was written. Many of the methods of diagnosis and treatment specified here for the diseases of horses are still in use in one form or another.

In the 4th century A.D. Apsyrtus of Constantinople taught veterinary medicine to cavalymen and wrote with some accuracy...
on contagious and infectious diseases of horses. During the period of 450 — 500 A.D. Vegitus Renatus wrote a complete work on veterinary medicine, *Books of the Veterinary Art*, and some historians consider him to be the “Father of Veterinary Medicine”, while others assign this role to Apsyrtus.

At this time iron horseshoes were first used and the Roman blacksmith (ferrarius) fitted and forged horseshoes. He also turned to the treatment of the diseases of horses and for many centuries thereafter veterinary medicine became synonymous with farriery.

Middle Ages

After the fall of the Roman Empire Europe entered the Middle Ages. These were dark ages, countries were ravaged by human and animal plagues, by wars, and by social and economic chaos.

During the seventh and eighth century large areas of Asia, North Africa, and Southern Europe were conquered by Islam. It was these invaders who rescued the Greek and Roman manuscripts which frequently had been threatened or destroyed by early Christian mobs. The Arabs salvaged the documents, translated and annotated them, and accepted them as the foundation of science and philosophy. The sciences flourished in Mohammedan Spain at centers such as Cordoba and Seville, as well as in Southern Italy and Sicily. From here the systematic study of the sciences spread to other parts of Europe.

A number of universities and medical schools were established. The first organized medical school in Europe was at Salerno, Italy, and it flourished from the tenth to the thirteenth century. During this period medical schools were also founded at Bologna, Padua, Montpellier and Paris. The university at Oxford (England) was established during the thirteenth century.

Teaching and practice of medicine in medieval Europe was hampered by superstition and dogmatism which continued to flourish throughout the Middle Ages. Medical learning was restricted to the study of ancient texts, dissection of cadavers was forbidden, and anatomy was studied through the dissection of pigs. During this time medical knowledge advanced very little.

The Age of Discovery

The end of the fourteenth century ushered in the Renaissance, a two-hundred year period which was one of the most revolutionary and stimulating in mankind’s history. Printing and gunpowder were invented, America was discovered, Copernicus stated the new cosmology, the Reformation took place, and all these forces worked to free science and medicine from the chains of medieval scholasticism.

Constantinople fell in 1453 and the upheaval scattered the Greek scholars there, and their manuscripts, all over Europe. Documents could now be studied in the original languages rather than in translation and this was instrumental in the rise.
of humanism. In less than 100 years man learned more about nature and the universe than in any previous time in history. People began to think as individuals rather than as masses whose thoughts and actions were dictated by government or the church. Great strides were made in mathematics, astronomy, and virtually all other natural sciences.

Anatomy was studied by Leonardo da Vinci and he made his masterful drawings. In 1543 Andreas Vesalius published De humani corporis fabrica, the foundation work of modern anatomy. Pulmonary circulation was discovered simultaneously by Realdus Columbus (1510-1559) and Michael Servetus (1511-1553), and Gabriel Fallopius (1523-1562) described many anatomical structures. Paracelsus (c. 1493-1541) bridged the gulf between medicine and surgery and insisted that wounds be kept clean, contrary to the common belief that suppuration was necessary for healing. He simplified prescriptions, refused to accept the authority of the ancient physicians and began lecturing in German instead of Latin.

Giralmo Fracastoro (1483 - 1553) was the first to recognize typhus, the different methods of infections, and the contagious nature of tuberculosis. During the Renaissance surgery was regarded as inferior to medicine and was the province of barbersurgeons, thus not much progress was made. The Renaissance though freed medicine from the rigid dogma and gave rise to observation and experiment. Inductive reasoning was emphasized by Francis Bacon (1561 - 1626), laying the foundation of the scientific method. William Harvey (1578 - 1657), an English physician who studied at Padua under Fabricius, discovered the circulation of blood. This finding was to revolutionize medicine.

During this time many scientific instruments were developed, such as the telescope, the microscope, thermometer, and barometer. Intellectual and scientific activity was intense and several scientific societies were formed in England, Italy, Germany, and France. These groups promoted research and published the results in special publications and scientific journals.

While medicine was making remarkable advances, veterinary medicine continued to be practiced on a low level. Little had been written after Vegetius. The first modern scientific veterinary work did not appear until 1598 when Carlo Ruini, an Italian nobleman, published his work Anatomia del Cavallo (Anatomy of the Horse). Ruini, singlehandedly, created the science of veterinary anatomy.

Veterinary medicine continued to be in the hands of farriers until the latter half of the 18th century when great animal plagues in Europe made reforms in the system of veterinary education necessary.

The European Schools

In the first half of the 18th century animal plagues devastated Europe. It is estimated that 200 million cattle died of rinderpest, the so-called cattle plague, on the European continent from 1710 to 1760. The disease skipped across the Channel and caused heavy losses in England. Deaths in cattle due to contagious pleuropneumonia, were also common, and distemper in dogs was a major problem. It was realized that the system of apprenticeship training for farriers could not meet the demand for well-trained veterinary practitioners.

In 1761 an alarmed French government decided that drastic steps were necessary to combat animal disease. It appointed Claude Bourgelat (1712 - 1779), a French veterinarian, to establish a school at Lyons and in 1762 a school was opened. It devoted most of its attention and resources to the diseases of cattle and attracted not only French students, but also students from neighboring countries. In 1764 the school at Lyons was designated as the Royal Veterinary School and was given the support of the crown. Bourgelat was then called to Paris and directed to establish a second school which was opened at Alfort in 1765. It became known as the National Veterinary School and its main area of interest was
diseases of horses. Sixty years later a third veterinary school in France was founded at Toulouse, in 1825.

Other European countries soon recognized the value of university level education for veterinarians and began to establish schools. Noteworthy among these were institutions at Hanover (1778), Dresden (1780), Milan (1789), London (1791), Berlin and Munich (1793), and Giessen (1798). By 1800 about twenty veterinary schools had been established in Europe. During the early 19th century other schools appeared: St. Petersburg (1808), Naples (1815), Berne (1816), Zurich (1819). Others were to follow and by the mid-19th century veterinary medical education was firmly established on the European continent and in England.

*SLAYING A MAD DOG, 16TH CENTURY. (From: Smithcors, Evolution of the Veterinary Art.)*

**The European Connection**

Before 1860 most graduate veterinarians in America came from the Royal veterinary College in London and this school deserves some further mention. It came into being largely through the efforts of Granville Penn and Charles Vial St. Bel, a French veterinarian, and it received the backing of some influential agricultural societies. John Hunter, the famous Scottish surgeon, also played a role in establishing the school. Instruction began in 1793 with four students and a hospital for fifty animals. Before long St. Bel died of glanders and the school passed into the hands of Edward Coleman, a surgeon. Under his guidance the school turned its attention to horses, to the exclusion of other species. Coleman was an autocrat and until 1839 he firmly controlled veterinary education in England, often in not the most enlightened fashion. He was succeeded by William Sewell who continued Coleman’s policies and there was little change in veterinary education at the school until the mid-19th century.

The graduates of the London school were not highly regarded, though one, a Scotsman, William Dick, distinguished himself. He was the son of a farrier and after three months at the London school was awarded a diploma. He returned to Edinburgh and began to lecture on veterinary matters at the Edinburgh School of Arts. In 1823, with money appropriated by the Highland Society, he was instrumental in starting the Highland Society veterinary School. This later became the Edinburgh veterinary College and finally the Royal (Dick) veterinary College, in 1911. Under the firm hand of William Dick, and his sister as business manager, the school attracted large numbers of students even though the faculty never numbered more than six. Dick died in 1866 and left an astonishing legacy. Seven of his students went on to become deans at veterinary schools in Great Britain and America. Outstanding among this group was James Law who graduated from the Edinburgh school in 1857 and immigrated to America. In 1896 he became the first dean of the Veterinary School at Cornell University, Ithaca, New York.
Animal Plagues in the New World

The earliest settlers in America brought livestock with them. At first these were primarily chickens and pigs, but before long horses and cattle accompanied the immigrants. Although animal disease was rampant in Europe, there was little disease in America prior to the mid-18th century. The long voyage from Europe served as a quarantine period and the sick animals died. Only the healthiest reached the American shores.

Initially the settlements in the new country were scattered and there were no large concentrations of domestic animals in any one area. The livestock thrived on the rich lands and some animals increased so much in population that they became a nuisance. Pigs multiplied rapidly at Jamestown and barricades had to be erected to keep them from roaming the streets. Later pigs provided the foundation for a prosperous trade with the West Indies when salt pork and lard where shipped to the Caribbean from New England in exchange for rum and sugar.

By 1750 there were newspaper reports of rabies and distemper in dogs. Distemper, probably influenza, was reported in horses. There were reports of cattle with distemper and Spanish staggers (Texas fever). In 1785-86 there was an alarming outbreak of rabies, and, in 1792, Dr. James Mease, a Philadelphia physician and a student of Dr. Benjamin Rush, described the disease in his thesis *Diseases Produced by the Bite of a Mad Dog and Other Rabid Animals*. In 1796 Dr. Mease investigated an outbreak of a disease, later recognized as Texas fever, in cattle at Anderson Ferry, Pennsylvania. He presented a report in 1813; it is believed to be the first written description of the illness.

Texas fever was a problem for the early colonists. In the beginning of the 18th century, they had developed a cattle industry in the Southern states because the warm climate provided year-round pastures. These cattle were driven to the bottomlands around Baltimore and Philadelphia where they were fattened for market. By the 1760s it was recognized that an aftermath of the driving of southern cattle to northern markets was an outbreak of disease along the trail. Northern cattlemen began to station armed patrols along the trails to turn back the cattle. In 1766 the Colony of North Carolina passed laws to restrict the movement of cattle from South Carolina and Georgia.

As the settlements spread westward the center of the cattle industry shifted from the south to the west and southwest, and the disease went with the cattle. By the Civil War the disease was heavily concentrated in Texas and became known as Texas fever. It posed a serious threat to the cattle industry and to the supply of meat products needed by the populations of the rapidly growing cities in the North.

During the last half of the eighteenth century, there were great improvements in the transportation system and the meatpacking industry was developing. Cities were undergoing tremendous growth, spurred by the industrial revolution. There was pressure for more, and safer, animal products. The increased movement of livestock between regions opened the door for disease outbreaks and the losses due to disease were staggering. In 1870 it was estimated that the total value of livestock in this country was approximately 1.3 billion dollars. In 1875 the United States Department of Agriculture, which had been established in 1862, reported that the annual loss due to livestock disease was 100 million dollars.

Texas fever was not the only disease inflicting heavy losses upon farmers. Other diseases plagueing the young livestock industry were hog cholera and contagious pleuropneumonia. At this time there was no organized effort to combat these losses. Eventually the Commissioner of Agriculture appointed an expert panel to investigate Texas fever, but its report was confusing and inconclusive. Ironically, the cattlemen themselves were now associating the disease with the tick season but the scientists refused to accept the significance of this. It was to be a number of years before it was discovered that the tick indeed played an important role in the transmission of Texas fever.
"The Bond," original wood sculpture by Dr. David E. Rogers, 1982. On exhibit in the Veterinary Hospital of the University of Pennsylvania.
Prior to 1883 there was a small group of veterinarians conducting research on contagious diseases, but they lacked financial support and facilities. George B. Loring, Commissioner of Agriculture, took recognition of this situation and, in 1883 under his direction, an experiment station for investigating contagious diseases in domestic animals was built in Washington, D.C. This was known as the "Veterinary Station." During the same year, a Veterinary Division was created in the Department of Agriculture under the direction of Dr. Daniel E. Salmon (1850—1914), a veterinarian. On May 29, 1884, this progressive move culminated with the establishment of the United States Bureau of Animal Industry (B.A.I.).

The first chief of the bureau was Dr. Salmon who assembled a force of sixteen veterinarians and other scientists and technicians, scattered over eight states. Through their research efforts it was established that the tick carried the causative organism of Texas fever, the protozoan *Piroplasma bigemina*. To eliminate the carrier, cattle were dipped and this led to the eradication of the disease. The discovery of a carrier organism and the elimination of Texas fever by dipping the cattle was one of the major breakthroughs of the 19th century. It paved the way for the control of other diseases transmitted by insects. By 1898 all restrictions on the movement of southern cattle were lifted as long as the animals had been dipped under B.A.I. supervision, using a sulfur-oil dip. Later the more effective arsenical dips were introduced and by 1940 cattle disease carried by ticks was essentially eliminated.

Theobald Smith, a physician, received most of the accolades for determining the etiology of Texas fever, but he in turn gave much credit to the veterinarians who worked with him. These included Fred L. Kilbourne and E.C. Schroeder, who conducted field work and blood studies. Cooper Curtice (1856—1939), also a veterinarian, worked out the life cycle of the tick and developed the eradication program. The battle against Texas fever established the veterinary profession as a potent force in dealing with animal diseases and it established the cooperation in research between medical and the veterinary professions.

Two other major animal diseases attacked by the B.A.I. in the early years were hog cholera and contagious pleuropneumonia. The work on cholera led to some bitter controversy among veterinarians. Eventually, primarily through the work of Dr. Salmon, it was shown that what was commonly called hog cholera was in fact two diseases, hog cholera, caused by virus, and swine plague, a bacterial infection. Aside from Dr. Salmon, H.J. Deitmers, James Law, and Frank Billings worked on the research. Later Alexander De Schweinitz, a chemist, and Marion Dorsett, a physician, made some outstanding contributions. In 1897 De Schweinitz developed an effective serum for protection of pigs against hog cholera. After his death Dr. Dorsett continued the work and showed that hog cholera was due to a virus. She and others developed a serum virus inoculation against the disease.

Contagious pleuropneumonia had been introduced into the United States in 1843 by cattle imported from England. By 1880 the disease was widespread and seriously affected the export trade of cattle. In 1886
the B.A.J. ordered the slaughter of affected cattle and authorized the payment of compensation to owners. The program was very effective and by 1892 contagious pleuro-pneumonia had been eradicated. The same approach was used in combating outbreaks of foot-and-mouth disease of cattle and has been effective in preventing this serious disease in livestock.

The B.A.J. became the most potent force in the country for combating animal disease. Dr. John R. Mohler, an early graduate of the veterinary Department, University of Pennsylvania (1896) became director of B.A.J. in 1917 and served with distinction until 1943. In 1953 the Bureau of Animal Industry was superseded by the Agricultural Research Service.

The Early Practitioners

From the 1700s through the first part of the 19th century the farrier or the “handy” neighbor provided much of the veterinary service in this country. After 1800, in addition to the farrier, those who practiced veterinary medicine came from a variety of backgrounds. Some were graduates of European schools while others qualified by serving as apprentices to practitioners. Lastly, there were those who simply assumed the title, veterinarian, and “hung out a shingle.” By 1850 less than two dozen veterinarians had emigrated from Europe and there were no veterinary schools in this country. Animal diseases were treated with herbs and roots, according to prescriptions found in Europe.

No doubt the level of practice improved somewhat after European graduates appeared, but in 1870, in his textbook, the Farmers Advisor, Dr. James Law had this to say: “...in the Western Hemisphere, apart from the larger cities the great pecuniary interest in livestock is largely at the mercy of ignorant pretenders whose barbarous surgery is equaled only by their reckless and destructive drugging. The constantly recurring instances of absolute and painful poisoning, and cruel and injurious vivisections practiced under the name of remedial measures are almost too sickening to contemplate.”

Apparently, the first graduate veterinarian to practice in the United States was John Haslam. He graduated from the London veterinary College in 1800 and came to this country to practice in the area of Baltimore, Maryland. It seems that James Carver was the first United States citizen to obtain a veterinary degree. Carver was an expert horseman who solicited the support of Dr. Benjamin Rush in his quest for a veterinary education. Through Dr. Rush a small amount of money was raised and Carver traveled to England where he graduated from the London school in 1815. He returned from England evidently with the hope that the Philadelphia Society for Promoting Agriculture would support him in some venture in veterinary medical education. This was not forthcoming and Carver moved to Long Island where he established a practice.

Two families were prominent in providing veterinary service for livestock in Pennsylvania. They were the Michener family, headed by Isaiah Michener, and the Raynor family, headed by William Raynor. Michener began a practice in Carversville, Pennsylvania, in 1827. Apparently he had first served an apprenticeship. Michener conducted a large practice for sixty years and contributed articles on veterinary medicine to newspapers. One of his sons, Charles B. Michener, became the first
Assistant Chief of the United States Bureau of Animal Industry when it was established in 1884. Another son, J. Curtis Michener, followed his father in practice. His son, E. Mayhew Michener, graduated from the University of Pennsylvania veterinary Department in 1890 and practiced at North Wales, Pennsylvania.

William Raynor was an English-trained veterinarian who conducted a practice on the east bank of the Schuylkill river in the vicinity of Manayunk in the early 1800s. His five sons became practicing veterinarians through an apprenticeship program.

During the last quarter of the 19th century, there was an increase in the number of veterinarians in the United States. Some were European immigrants, others came from schools in Canada, and for the first time there were graduates from schools in this country. Many practitioners and early leaders in the profession in the United States were graduates of private schools which developed in this country, beginning around 1875. Later the first graduates from schools associated with universities made their appearance.

The horse was the animal which received the greatest attention of practitioners during the first three-quarters of the 19th century since it supplied most of the power needed for transportation and farming. As the disease rate among livestock soared, the profession began to devote more of its effort to farm animals. Despite the increase in livestock practice there was much concern in the profession when the bicycle, automobile, and tractor began to replace the horse. Some individuals actually feared the profession might become extinct. The horse as a transportation animal had a brief resurgence during World War I. Colonel Jesse Derrick, a graduate of the University of Pennsylvania in 1916, was a young cavalry officer in the newly formed veterinary Corps of the United States Army. He was assigned to the 3rd Division in France and had over 7,000 horses under his care.

Following World War I there was a depression and this, along with increased admission requirements at veterinary schools and a lengthening of the course to four years, resulted in a marked drop in enrollment and a subsequent decrease in the number of practitioners. The situation gradually improved and by 1930 enrollment was on the increase and the profession once again resumed its growth.

The Early American Educational Experience

Despite the outstanding early contributions of the United States Bureau of Animal Industry and the efforts of a few individual veterinarians another factor was needed to develop veterinary medicine as a respected science in America. This was the formation of a strong educational system.

The history of veterinary medical education in North America begins with the establishment of private schools. From the mid-19th century until 1927, these played an important role. Some were good and some were very poor, but nevertheless it is estimated that nearly 10,000 veterinarians received their diplomas from such private institutions. Some of these graduates became the earliest leaders in the profession.

In Philadelphia, in 1846, Mr. Robert Jennings began a series of lectures on veterinary matters during the winter months. Jennings, at this time, was apprenticing with Thomas J. Corbin, a veterinary surgeon in the city, and was also attending one of the medical schools. The lectures, attended mainly by medical students, continued each winter until 1850 when Jennings applied to the state legislature for a
charter to begin a school. This was granted in 1852. An announcement was made that the school, known as the Veterinary College of Philadelphia, would be open to receive students in November 1853. Jennings, however, failed to obtain a suitable building and equipment, and no students appeared. The majority of veterinarians in Philadelphia opposed the idea of the school, believing that it was premature. In 1859 Jennings renewed the charter and once again started a school using rooms donated by the Philadelphia Society for Promoting Agriculture. Only two students enrolled and apparently the venture never became very active and was abandoned in 1866. At this time a group of Philadelphia veterinarians obtained a charter for a school known as the Pennsylvania College of Veterinary Surgeons. A faculty was appointed and a building equipped, but there were few students and the school failed in 1870.

The first substantial veterinary schools in North America were founded in Canada. In 1862 the Ontario Veterinary School was founded at Guelph, and in 1866 the Montreal Veterinary College, a private school, was established. In 1889 McGill University took over the Montreal school and renamed it the Faculty of Comparative Medicine and Veterinary Science. This institution lasted until 1903. It had 312 graduates, and had a noted faculty member in the person of Dr. William Osler.

One of the stronger private schools in the United States was the American Veterinary College in New York City, organized by a French veterinarian, Alexandre Liautard, in 1875. Dr. Liautard was well known in the profession and was one of the organizers of the United States Veterinary Medical Association. The American Veterinary College continued as such until 1889 when it merged with the New York College of Veterinary Surgeons to form the New York American Veterinary College. In 1913 the school became a state institution known as the New York State Veterinary College of the New York University. This school, as did a number of others, awarded the D.V.S. degree and during its lifetime had over 800 graduates. From 1917, until the school closed in 1922, its dean was Dr. W. Horace Hoskins, a former member of the faculty of the Department of Veterinary Medicine, University of Pennsylvania.

A private school which survived thirty-seven years was the Chicago Veterinary College which awarded the M.D.C. degree (Medical Doctor Comparative) and 2,406 persons were granted this degree. Among the private schools, the Kansas City (Missouri) Veterinary College enjoyed a good reputation. It conferred the D.V.S. degree and had over 1,800 graduates. Some other private colleges with substantial numbers of graduates were the McKillip Veterinary College (Chicago), Indiana Veterinary College (Indianapolis), the Grand Rapids (Michigan) Veterinary College, and the St. Joseph’s (Missouri) Veterinary College. The last of the private schools was the United States College of Veterinary Surgery in Washington, D.C., organized in 1894 and suspended in 1927; it had 419 graduates.

In addition to the private schools, there were a few early veterinary schools connected with universities, but they did not survive beyond 1918. The most notable were the previously mentioned Faculty of Comparative Medicine and Veterinary Science
of McGill University, the School of Veterinary Medicine at Harvard University, and George Washington College of Veterinary Medicine. The school at Harvard existed from 1882 until 1901. It awarded the M.D.V. degree (Medical Doctor Veterinary), and while it was highly regarded, it had only 128 graduates. Likewise, the school at George Washington University had only a few graduates during its existence (1908-1918). During most of this time, its dean was David E. Buckingham, V.M.D., an 1893 graduate of the University of Pennsylvania Veterinary Department.

There were also the "quack schools." These often had only one or two faculty members, and in some cases, the requirements for a diploma were the reading of a book and the payment of fees. In addition, some offered a correspondence course leading to a degree. These "schools" were a source of embarrassment to the developing profession.

While private institutions made a contribution to the country's growing need for trained veterinarians, it was obvious that the future of veterinary medical education had to come about through schools which were an integral part of established universities. The Ontario Veterinary College was established at Guelph, Canada, in 1862, and organized under the Canadian Department of Agriculture. It is affiliated with the University of Toronto. In 1879 the Division of Veterinary Medicine, Iowa State College, was created, followed closely by the Veterinary Department of the University of Pennsylvania (1884), and the College of Veterinary Medicine at Ohio State University (1885). Before the turn of the century there were three other schools organized as parts of a university: Ecole De Medicine Veterinariare De La Province De Quebec (Montreal, 1886), New York State Veterinary College at Cornell University (1894), and College of Veterinary Medicine, State College of Washington (1895). The fact that most veterinary schools are associated with state universities can be attributed to the federal land grants made in 1862. Under this program each state received a very substantial amount of acreage on which to construct institutions for higher learning. One of the stipulations was that these schools provide education in subjects pertaining to agriculture and mechanical arts.

The development of veterinary schools along with the departments of veterinary science and, in some cases, agricultural experiment stations, was a natural outgrowth of these conditions.

The situation at Cornell was interesting. Cornell University had its beginnings in 1868 and, when it was established, a chair in veterinary medicine was created. This was filled by Dr. James Law who taught a course in veterinary science. Those successfully completing this four year course were awarded the degree of Bachelor of Veterinary Science (B.V.S.). Following this, an individual could continue his studies for another two years, then the D.V.M. degree was awarded. Dr. Daniel E. Salmon, the first Chief of the United States Bureau of Animal Industry, received a B.V.S. degree in 1872 and a D.V.M. degree in 1876. It is believed that this was the first D.V.M. degree awarded in the United States.

Joining Together

Shortly after the middle of the 19th century there was some interest on the part of veterinarians to organize. One of the leaders in this move was the peripatetic, ambitious Philadelphian, Robert Jennings. In 1854 Jennings formed the American Veterinary Association in Philadelphia. Despite its name, it was a purely local organization, as was the Massachusetts Veterinary Association, founded in Boston in 1857. Jennings began to correspond with others about the advantages of forming a national organization and eventually a meeting was arranged at the Aston House in New York City on June 9, 1863. On June 10th, a constitution was adopted and the United States Veterinary Medical Association came into being. Its first president was Dr. J. H. Stickney, a graduate of the Royal Veterinary College in London. This was the first such organization, and in its early years it was made up largely of veterinarians from Eastern States. Most of the
meetings were held on an annual and semi-annual basis in Boston and New York City. In 1884 it moved West with a meeting in Cincinnati, and from then on met in other midwestern cities.

In 1898 the United States Veterinary Medical Association became the American Veterinary Medical Association (A.V.M.A.). The early history was marred by some personal rivalries and at first the organization grew slowly. By 1899 there were 207 members, and by 1910 the organization had grown enough to span the continent and to meet in San Francisco. In 1913 the A.V.M.A. had a membership of 1,650.

Some alumni and faculty of the School of Veterinary Medicine, University of Pennsylvania, played prominent roles in the early history of the professional organization. Dr. Rush Shippen Huidekoper, first dean of the School, was president of the United States Veterinary Medical Association in 1891. Dr. Leonard Pearson, distinguished dean of the School, was president during the first year (1899) that the Association was known as the A.V.M.A. Beginning in 1888, Dr. W. Horace Hoskins was secretary, and then president from 1893 through 1895. Dr. John R. Mohler, a graduate in the class of 1896, held the position of president during the years 1912-1913. In 1925, Dr. John Adams, an alumnus and faculty member, held this prestigious office.

Along with the growth of the American Veterinary Medical Association local and state groups also organized and grew. Although Robert Jennings had organized a local group in Philadelphia in 1854, it had not survived. The oldest local association still in existence is the Keystone Veterinary Medical Association of Philadelphia. This group came about through some informal meetings of three veterinarians, all of whom would serve later on the faculty of the Veterinary Department of the University of Pennsylvania. Dr. Alexander Glass, Dr. William L. Zuill and Dr. W. Horace Hoskins gathered at times in the kitchen of Dr. Zuill’s home to discuss clinical cases. As an outcome of these discussions they invited Dr. S.A. Grange, Dr. Thomas Raynor and Dr. Isaiah Michener to join the group and eventually these individuals formed the Keystone Veterinary Medical Association in 1882.

Meetings were held in Dr. Grange’s infirmary and later in a room at 249 South 15th Street. In later years the group frequently met at the School of Veterinary Medicine.

The Pennsylvania Veterinary Medical Association (P.V.M.A.) takes its origin from the Keystone group. The state association was founded on August 22, 1883. The first meeting under the new charter was held on March 3, 1885, at Earley's Hall, 13th and Arch Streets, Philadelphia. Dr. J.W. Sallade of Scranton, Pennsylvania, presided and a set of by-laws and a constitution were drawn-up. Following this meeting the association began to meet at various times in localities throughout the state. The P.V.M.A. became active in drafting practice laws, including the formation of a Board of Veterinary Examiners. The first president of the Board of Examiners was Dr. Simon J.J. Harger, a faculty member of the Veterinary Department, University of Pennsylvania. Another faculty member, Dr. W. Horace Hoskins, was secretary. In 1889 an act was passed by the state legislature in which veterinarians would be registered by county prothonotaries and in 1890 the following categories were reported as being registered: graduate veterinarians, 150; existing practitioners, 752; illegal practitioners, 136. In 1890 a plan was formulated to establish local associations throughout the state with their constitutions and by-laws being approved by the state association. In turn, each local group would have representation in the state association.
A true body of American veterinary literature did not develop until the latter half of the 19th century. Prior to this period much of the writing was confined to farriery or to accounts of animal disease published by practitioners in newspapers. One of the early contributors to newspapers was Dr. Isaiah Michener of Carversville, Pennsylvania. Another source of information in the early 1800’s was the Published Memoirs of the Philadelphia Society for Promoting Agriculture.

In the 1850s George H. Dadd (1813-1868) of Boston published a short-lived journal named the American Veterinary Journal. Although Dadd used the degrees M.D. and V.S., there is some question as to whether he had earned either of these. The first substantial journal was the American Veterinary Review which appeared in 1877. It was edited by a French veterinarian, Alexandre Liautard, and was the official organ of the United States Veterinary Medical Association. In 1891 Dr. Liautard assumed personal ownership of the publication. He remained as senior editor until 1915 when, beginning with volume 48, the American Veterinary Review was taken over by the American Veterinary Medical Association and was published as the Journal of the A.V.M.A.

Another early publication was the Archives of Comparative Medicine and Surgery. This was first issued in 1880. Later its name was changed to the Journal of Comparative Medicine and Surgery, and finally to the Journal of Comparative Medicine and Veterinary Archives. Drs. Rush Shippen Huidekoper and W. Horace Hoskins both edited this journal which ceased publication in 1903.

Beginning in the 1880s a valuable source of information was the reports issued by the U.S. Department of Agriculture. From 1884 to 1912 the United States Bureau of Animal Industry issued bound volumes containing much material on research, diagnosis, treatment, and control of animal disease.