

Private Veterinary Colleges in the United States, 1852-1927

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FORMAL VETERINARY MEDICAL education in the United States began in 1852, with the opening of the Veterinary College of Philadelphia.¹⁻⁵ This was a separate, privately owned veterinary college—the first of 26 such institutions that would help in the foundation and the growth of the nation's veterinary profession (Table 1).⁶⁻⁸ But, 75 years later, the commercial veterinary colleges were no more (Fig 1). The United States College of Veterinary Surgeons, in Washington, DC, which was the last operating one, closed its doors after the commencement exercises held for five on June 15, 1927.⁹ Altogether, this category of educational institution had graduated no less than 9,388 veterinarians.

A few analytical statements have been made about these private veterinary colleges, and generally little good was said.^{10,11} One graduate of this form (or category) of educational institution observed that "the private veterinary colleges should never have been allowed to become the necessity they were."¹² This may have been the best statement ever made about them. So the question arises: Why are the origins and early developments in the veterinary medical educational system in the United States contained in the story of the private colleges? Also, the second question: What caused them to disappear? The purpose in the present report is to search for answers to these questions.

Early Beginnings

When veterinary colleges appeared in the United States, higher education had hardly begun to organize to meet the growing American needs for scientific and technical persons.¹³⁻¹⁶ Religion (or theology), law, and medical practice were just becoming major studies at the established universities and colleges. But for many more years, persons entering into the practice of the farriery and the veterinary art obtained their know-how from older, traditional healers or from some one among the small scattering of foreign-educated immigrant veterinarians and sometimes by apprenticeship or by "reading" in an office. Moreover, lecture-hall presentations on veterinary medicine were given to agricultural society audiences (Philadelphia Society for Promoting Agriculture) and to students attending medical colleges in Philadelphia (in 1813, by James Mease, MD; in 1846-1850, by Robert Jennings, VS).⁵⁻⁷ Also, in Boston in 1853, lectures on

TABLE 1—Private Veterinary Colleges in the United States, 1852-1927

Name	No. of graduates	Year established or chartered	Year of first graduates	Year closed or discontinued
Veterinary College of Philadelphia	ND	1852	1859	1866
Boston Veterinary Institute	ND	1854	ND	1860
New York College of Veterinary Surgeons	291	1857	1867	1899
Veterinary Institute of Chicago	ND	1862	ND	ca 1869
Pennsylvania College of Veterinary Surgeons	ND	1866	ND	1870
St Louis Veterinary College	ND	ca 1875	ND	(ca 1875)
American Veterinary College (New York)	578	1875	1876	1899
Columbia Veterinary College (New York)	79	1877	1879	1884
Chicago Veterinary College	2,320	1883	1884	1920
New Jersey Veterinary College (Trenton)	ND	ca 1887	ND	(ca 1887)
Iowa Veterinary College (Des Moines)	13	1890	1892	1894
Kansas City (Mo) Veterinary College	1,857	1891	1892	1918
Ohio Veterinary College (Cincinnati)	67	1891	1892	1896
Indiana Veterinary College (Indianapolis)	902	1892	1893	1924
National Veterinary College (Washington, DC)	50	1892	1893	1896
McKillip Veterinary College (Chicago)	1,223	1894	1897	1920
United States College of Veterinary Surgeons (Washington, DC)	419	1894	1895	1927
Western Veterinary College (Kansas City, Mo)	178	1897	1898	1908
San Francisco Veterinary College	330	1899	1900	1918
Collins Veterinary College (Nashville, Tenn)	ND	ca 1899	ND	(ca 1899)
Cincinnati Veterinary College	414	1900	1903	1920
University Veterinary College (Kansas City, Mo)	53	1902	1903	1906
St Joseph (Mo) Veterinary College	421	1905	1908	1923
Terre Haute (Ind) Veterinary College	145	1909	1911	1918
Southwestern Veterinary College (Dallas)	2	1909	1912	1916
Arkansas Veterinary College (Fayetteville)	25	1913	1916	1921

ND = not determined.

anatomy and diseases of the horse were given (by D. D. Slade, MD) on request of the Massachusetts State Agricultural Society,⁷ and in Cleveland between 1854 and 1857, Jennings had lectured to students enrolled at the old Ohio Agricultural College.⁵⁻⁷

A proprietary agricultural college in mid-19th century, such as the one in Cleveland, was an important forward step for the institutionalizing of veterinary medical education, but it was only one of the new forms of institutions that were now coming

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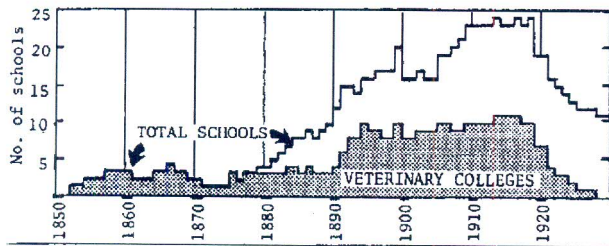


Fig 1—Relationship of the total number of schools of veterinary medicine (upper line) to the number of private veterinary colleges (shaded area). Between 1852 and 1879, the latter were the only veterinary medical schools in the United States; after that time, other categories of schools (eg, in land-grant agricultural colleges, universities) appeared, increased, and then continued after the last of the private veterinary colleges closed in 1927. The greatest number of private veterinary colleges active in a given year was 11, in the years 1913 through 1916.

on the educational scene. They would start to fulfill a need for specific classroom environments and curricula which the existing classical universities and denominational colleges had seemed reluctant to provide for or were not permitted to do. Another new educational structure was the separately organized scientific, technical, and professional school.¹⁷⁻²⁰

Into this situation were born the early veterinary colleges—in Philadelphia, Boston, New York, and Chicago. These colleges, according to Dr. Alexandre Liautard, a Frenchman and a “founding father” of American veterinary medicine,²¹ appeared at a moment in agricultural history when the health of American livestock was becoming threatened by contagions from Europe and when the increasing monetary importance of the individual animal was recognized.⁴ Not surprisingly, in the big cities, practitioners of the veterinary art, physicians, and persons possessing some business acumen turned their attention to writing books about the broad field of farriery or to teach others who wanted to practice—mainly, the healing of horses. The early “teachers” wanted the engaging title of professor, and they were organizers! A few would join together to obtain a specially assigned state’s charter or the general documents of incorporation to operate a college; then, they set up a classroom in a new-built facility or veterinary clinic. In many states, this was not too difficult to do.¹⁷ The first of these organizing efforts gave origin to the Veterinary College of Philadelphia, already mentioned, which gained a charter on Apr 15, 1852; one of its principal operators was Dr. Jennings.

Then, the 2nd private veterinary college, the Boston Veterinary Institute, came into existence; Dr. Slade and George H. Dadd, MD(?), VS(?), were closely associated with this.^{4,6-8} And soon afterward, the 3rd one, the New York College of Veterinary Surgeons opened under a state’s charter granted in 1857.^{4,6-8} John Busteed, MD, emerged as its nominal spokesperson. None of these was really a success up through the Civil War; all were proprietary institutions.

Time for Change: The Civil War

In 1864, Chicago became the 4th United States city in which a veterinary college was opened—the Veterinary Institute of Chicago; it lasted about 5 years.⁶⁻⁸ Then, in 1866, a few enterprising city practitioners in Philadelphia joined together to form the Pennsylvania College of Veterinary Surgeons, and this too, did not last long—for about 4 years.⁴⁻⁸

But, far more important than these few college openings and closings during the Civil War (1861–1865) were several other events that had taken place—events whose developmental paths would cross later and exert strong military (national defense) and even-stronger agricultural and governmental influences on the developing veterinary medical educational system.²² The events were unrelated in their origins, and interestingly, all occurred at the national level; they were (i) the entry of veterinarians into the composition of the Union army cavalry regiments, (ii) the creation of the US Department of Agriculture by the act of Congress, approved May 15, 1862,^{7,23} and (iii) the passage of the Morrill Land-Grant Agricultural College Act, signed by President Lincoln on July 2, 1862.^{15,18,20}

The 4th event, occurring June 9–10, 1863, in New York City, was the organizing meeting of the United States Veterinary Medical Association, renamed in 1898 the American Veterinary Medical Association.^{4,6-8,24} Furthermore, hardly the events that can be overlooked at this moment in veterinary educational history were the openings of 2 proprietary institutions in Canada—in 1862, the Toronto or Ontario Veterinary College, and in 1866, the Montreal Veterinary College.^{4,25} The Canadian school graduates were the bulk of the veterinary profession in the developing mid-America.

The 1870s and 1880s

In the immediate post-Civil War years, only the New York College of Veterinary Surgeons was viable. Any real numerical increase of college-educated practitioners would be the output from the 2 Canadian veterinary colleges, whose classrooms were filled with many students from the United States. During these decades, also, unknown numbers of foreign veterinarians had come into the United States, accompanying the great waves of immigrants. There was a great heterogeneity of the educated veterinary population throughout the nation. Of 122 veterinarians identified by institutional alumni lists in the late 1870s, only 25 (or 21.3%) were graduates of the New York City colleges and about 30% were from the Canadian schools of veterinary medicine, but 50% had gotten their education in England and Scotland.^{26,a} These early graduates set up practices in their own clinic

^aAccording to census data, the US veterinary population numbered 392 in 1860; 1,166 in 1870; and 2,130 in 1880 (Fish PA: Seventy years of veterinary service in the United States. *J Am Vet Med Assoc* 74:915–917, 1929). The obvious disparity between these data and the numbers of graduate veterinarians derived from school alumni lists would seem to rest mainly with the definition of veterinarian: (a) person with an earned academic degree vs (b) person using the title, or having the occupation, of veterinarian.

buildings and in the livery stables in cities and in many small towns; a few were located not too far from the American frontier which was beginning to flow out of the Midwest. The widening distribution reflected the growing demands for educated veterinarians, and the latter were showing that the treating of animal diseases which long had been regarded as a natural state of mankind was a means of a livelihood.

First Successful US Veterinary College

In New York City in 1875, almost all of the faculty at the old New York College of Veterinary Surgeons (led by Dr. Liautard) removed themselves to establish the American Veterinary College.^{4,6-8,b} This is generally regarded as the 1st successful veterinary medical school in the United States. Two or 3 years later, the old New York institution was disrupted again as more faculty and students left to form the Columbia Veterinary College. (The latter seemed to have faded away into the American Veterinary College, in 1884.) These additions soon changed the percentages of the educational origins of veterinarians, now numbering nearly 500, as follows: from the United States colleges, 46%; the Canadian school graduates, 42%; and 12% from English, Scottish, French, and German schools.²⁷

Thus, the 3 commercial veterinary colleges in New York had halted the dependence for US veterinary manpower upon chance migrations of foreign graduates and away from the productivity of Canadian or other foreign schools of veterinary medicine. Moreover, the successes of the early graduates and the needs for more veterinarians in the growing agricultural economy of the nation led to the formation of additional schools.

Proliferation of Veterinary Science Departments in Agricultural Colleges

But until additional schools of veterinary medicine were formed, agricultural colleges, such as the short-lived proprietary one in Cleveland (in the 1850s), found the means to teach a little bit of anatomy and physiology to students in college classrooms. In Michigan, in response to stimulation from the state's agricultural society, this teaching was a part of the agricultural curriculum begun in 1853 or 1854 at the University of Michigan (in Ann Arbor). The curriculum was renewed in 1857 with the opening of the Agricultural College of the State of Michigan (in East Lansing), where physicians occupied the academic chairs which covered courses in physiology, entomology, and zoology.^{20,28,29} In time, somewhat similar instructions were undertaken in new educational institutions which gained the benefits of the Morrill Land-Grant Agricultural College Act of 1862, and veterinarians were assigned to the professorships and as heads of veterinary science departments. This occurred at Illinois

Industrial University (in Urbana)¹⁸ and, in 1868, at Cornell University (in Ithaca, NY).^{30,31} (By the very early 1890s, about half (or 22) of the land-grant agricultural colleges each had a veterinary science professor.³²)

A Major Turning Point in the Educational System for Veterinarians

At various times, these veterinary science departments in the agricultural colleges were regarded by the private veterinary colleges as competitors for the same students which they might have otherwise enrolled. However, the 3 commercial veterinary colleges in New York City began to lose their place as the leading US source for veterinarians only after 2 different categories of educational institutions reorganized to have complete veterinary academic departments or professional schools. One of the categories included the Morrill Act or land-grant agricultural colleges^{15,20}; there were two at the beginning: Iowa State Agricultural College and Farm (in Ames) starting a professional veterinary curriculum in 1879,³³ and the Ohio State University (in Columbus) doing the same in 1885.⁷ The other category involved 2 prestigious classical universities in the East—at Boston, Harvard University (the nation's oldest) and at Philadelphia, University of Pennsylvania (which had had a medical school since ca 1765). The latter 2 universities, which were privately owned, started academic veterinary departments (both with medical orientations) in 1882 and 1884, respectively.^{5,7} These 4 host institutions would outlive any of the proprietary veterinary colleges, but at the time, there was no thought about this ever happening.

Equally significant with the institutionalization of veterinary medical educational programs inside these 4 recognized institutions of higher education was the fact that 2 of them—those in the Iowa and the Ohio land-grant colleges—represented a veterinary educational movement from the cities and into midwestern, rural America.^c This westward extension was soon helped along with the opening of 2 more schools: in 1881, the Northwestern Veterinary College,^d begun as an affiliate of what was referred to as the Minnesota College Hospital,^{6,7,34} and in 1883, the Chicago Veterinary College.^{6,7,35} The latter, a privately owned institution, became an educational empire that produced nearly 2,400 veterinarians before it closed (in 1920)—more graduates than by an other commercial veterinary college. Now, the American Midwest had begun to escape from dependence on Canadian educational institutions for veterinarians.

Thus, by the mid-1880s, 4 categories of institu-

^cOutside this general educational movement, sometime before 1867, the New Jersey Veterinary College, Trenton, was operated by a Dr. Smith (Miller WBE: Guessing an old mare's age, correspondence. *Am Vet Rev* 11:321-322, 1887).

^dThis school of veterinary medicine was a veterinary academic department or school within a privately owned medical college complex; its designation: Minnesota College Hospital Northwestern Veterinary College, Minneapolis. It opened in 1881 and closed in 1890, when the buildings were destroyed by fire. There was another Northwestern Veterinary College in about 1916, but it was a correspondence school with at least 1 post office box station, in Aberdeen, SD. (Mayo NS: Northwestern Veterinary College, obituary. *Am Vet Rev* 47:247-249, 1916).

^bIn 1875, also, a veterinary school had reportedly opened in St Louis, but nothing more is known since Liautard^d first referred to it.

tions of higher education in the United States were graduating veterinarians: (i) the independent private veterinary colleges; (ii) the land-grant agricultural and mechanical colleges (which were the forerunners of today's great state universities); (iii) the traditional American universities, and (iv) the privately owned medical colleges.⁷ Another category appeared a few years later—(v) the state-supported schools of veterinary medicine. The owners of the private veterinary colleges soon thought, of course, that they would be forced to close because of the developing new schools of veterinary medicine. They feared the competition from the other categories when trying to fill their classrooms with students—any sort of student,⁸ because in that period, so few persons had completed even their elementary school education.^{14,16} Without tuition-paying students, there would be no income, and without that money, the commercial veterinary colleges would be forced into academic weakness; others would close.

Competition for students was one of several concerns which alienated trustees and faculties of the private veterinary colleges from those in charge of the schools of veterinary medicine of the other categories. For example, there was reluctance to agree on the keeping of class-attendance records of students—a procedure that might have helped to guard against diploma sales and degree give-aways. In the matter of length of curriculum, the commercial veterinary colleges believed that the graded 2-year curriculum then coming into vogue was adequate and, furthermore, represented about all of the time and money which could be assessed against students wanting to become veterinarians.

USVMA Introduces Educational Reform through New-Member Qualification Requirements

Resolution of these problems on a nationwide basis was sought by the United States Veterinary Medical Association, which since its formation in 1863, had done or accomplished almost nothing on behalf of education.³⁶ Its own internal documents (constitution and bylaws) which defined new-member qualification requirements still allowed for the acceptance of a physician or most anyone practicing veterinary medicine and surgery, whether a graduate or not.²² But it now acted to add academic qualifications to the rules for applicants seeking membership in the association—thereby setting a common goal which all schools of veterinary medicine might strive for. Discussions on educational

standards for membership applicants were begun by the Association in convention in 1887, and the new specifications, as finally agreed on, were inserted into the bylaws of 1889; as follows³⁷:

... [The applicant] shall be a graduate of a regularly organized and recognized Veterinary school, which shall have a curriculum of at least three years, of six months each, specially devoted to the study of Veterinary science, and whose corps of instructors shall contain at least four Veterinarians. ...

This to go into effect January 1, 1893. It shall not be retroactive nor apply to applicants who were college matriculants prior to its passage, or during the year 1892.

The 3-year curriculum and the 4-person faculty were regarded as minimal requirements for schools of veterinary medicine which would be recognized by the United States Veterinary Medical Association, but for many schools, the requirements were objectives to be attained. During the period of formulation of the Association's "rule of 1893," 9 or 10 new schools were opened; 5 of them were private veterinary colleges³⁷: Iowa Veterinary College (in Des Moines, 1890), Kansas City Veterinary College (in Kansas City, Mo), Ohio Veterinary College (in Cincinnati), Indiana Veterinary College (in Indianapolis), and National Veterinary College (in Washington, DC); and yet another had gotten incorporation documents and would open in 1894.

At no other moment in veterinary educational history had quite so many schools opened in such a short time—all conducting the 2-year curriculum, despite the intending new-member requirements rule of 1893. Their openings were critically reviewed by several state and local veterinary medical associations as detracting from the profession's long-range views. In fact, a few associations followed the lead of the United States Veterinary Medical Association to exclude from membership rolls the recent graduates of veterinary colleges which seemed less than minimal in their educational operations.³⁸

State Laws, Army Regulations, and Federal Agricultural Bureau Employment Actions Move Ahead to Recognize Graduates

At about the time that the national volunteer association of veterinarians was bringing education into its new-member qualification requirements, others moved to recognize the graduate output from schools of veterinary medicine. Various local and state veterinary medical associations cooperated with states' legislators, and together, they garnered political support in the capitols to obtain veterinary practice laws—laws which constituted state boards of veterinary medical examiners (briefly, licensing boards).³⁸ The boards examined graduates who were seeking the privilege to practice in a given state, and the boards then licensed those who were found to be qualified. The knowledge and skills tested for, of course, were not obtainable in the poorly equipped or staffed schools, in the short-term schools, nor in the schools which enrolled anyone regardless of

⁷The classification was purposely made to identify the separate commercial veterinary colleges, but there is some confusion in assigning certain institutions to one category or another. For example, Cornell University is a privately owned American university (category iii), but it was the sole benefactor of New York's share of the Morrill Land-Grant College Act proceeds (category ii) and it granted veterinary degrees to 4 persons between 1871 and 1885 when it fit no category. Subsequently, by New York legislation (in 1894), the New York State Veterinary College at Cornell University was opened in 1896 as state-supported school (category v) which would be governed by Cornell University.

⁸Beside the Minnesota College Hospital Northwestern Veterinary College (see footnote 4), there were two in Michigan: Detroit College of Medicine Veterinary Department (opened 1890 and closed 1899) and Grand Rapids Medical College Veterinary Department (opened 1897 and closed 1918). The latter are more commonly referred to as the Detroit and the Grand Rapids veterinary colleges, which names were used in advertisements in the *American Veterinary Review*.

prior elementary or high school education, so that these marginal educational institutions began to enroll fewer students or their graduates were forced to settle where there were no veterinary practice laws or where the examinations were less comprehensive.

Also, recognition for graduates from the better schools came from 2 federal government agencies, each exercising certain employment authorizations. The War Department had, in 1879 by regulation, authorized the appointment of veterinarians for service with the cavalry regiments only if they were graduates of established and reputable veterinary schools or colleges.^{39,40} In the next singular event, occurring in 1894, the US Department of Agriculture, in conjunction with the US Civil Service Commission, imposed the requirement that the applicants entering the federal examination for the job of governmental veterinarian would have to be a graduate of a school of veterinary medicine.²³ Subsequently, admission to this federal examination was limited to graduates, who if graduated after 1897, had come from a school which conducted a 3-year curriculum. This last action brought together the US Department of Agriculture and the national volunteer association of veterinarians into a program for veterinary educational institution improvement; the two, it may be recalled, had only come into existence during the Civil War. In the 1890s, these agencies together with the Army thus began to participate jointly in the continuing development of the private veterinary colleges.

Agricultural Depression; More New Colleges, 1893–1899

When it seemed that great changes by veterinary medical educational institutions would be made, the United States entered into a deep financial depression—the panic of 1893—and progress was momentarily halted. At about the same time, the nation's horse population—long a part of America's growth and forever the central focus of the practice of veterinary medicine—was being challenged in the cities by the new electric street railways and by the bicycle craze.^{41,42} Influenced by the economy, veterinary college owners and school faculties developed no great enthusiasm about lengthening the professional curricula to 3 years, adding courses on diseases of cattle and swine, or giving instruction in meat and milk hygiene.²² In fact, school operations were threatened by dwindling student enrollments; numbers of graduates dropped from about 250 at the 1893 annual commencement exercises to an estimated low of 111 by 1899 (Fig 2).

In consequence, 2 commercial veterinary colleges ceased operations—the one in Des Moines and the college in Cincinnati (probably they should not have been opened at all).⁷ And in Washington, DC, and in New York, three of them—instead of closing—were absorbed into university organizations.⁷ Thus, the 4-year-old National Veterinary College was reconstituted (in 1896) at academic departmental level in Columbia University (which lasted

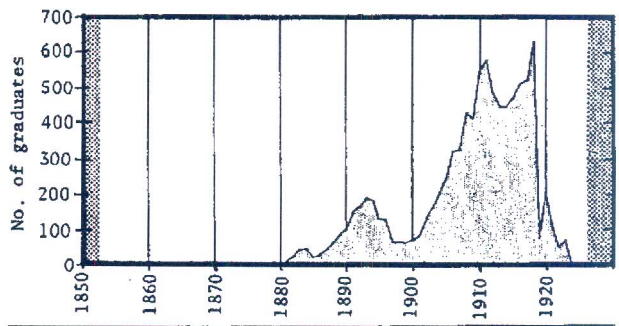


Fig 2—Graduate output from 19 of the private colleges. Numbers of graduates for the early decades and the last few years are too small to be shown on the chart.

about 3 years). In 1899, the 42-year-old New York College of Veterinary Surgeons (and Comparative Medicine) and Dr. Liautard's own American Veterinary College were merged, designated the New York-American Veterinary College, and amalgamated into New York University.⁴³ These mergers were milestones in veterinary medical educational history, because they focused attention on the beginning decline of the separate private veterinary college. A university board of trustees referred to "the principle now generally accepted in America that each degree-giving professional school should be part of a university, both to promote science and to enhance the value of professional degrees."⁴³

Nevertheless, the urge or the motivation to continue opening commercial veterinary colleges remained, because during this period (1893 through 1899), 5 new ones appeared: McKillip Veterinary College (in Chicago; which had been incorporated in 1892), United States College of Veterinary Surgeons (in Washington, DC), Western Veterinary College (in Kansas City, Mo), San Francisco Veterinary College, and the almost fraudulent Collins Veterinary Medical College (in Nashville, Tenn).⁴⁴

New Directions for Veterinary Medical Education

So, by the turn of the century, the veterinary medical educational system in the United States was well established. It had survived serious economic depression, and the graduates from the schools of veterinary medicine, in all categories, were doing more than they had ever done before. Of course, a great many veterinarians in the cities were giving up their once flourishing livery-stable and car-barn equine practices. There were, however, new hope and prosperity for the country practitioner who would use the vastly improved, expanded modes of communications and transportation (telephones, macadam roads, automobiles).^{41,45,46} As of 1900, the number of schools of veterinary medicine in the United States totaled 16, a half of which number were privately owned, and the remainder were the operating academic departments of land-grant agricultural colleges (3—Iowa, Ohio, and Washington), of universities (3—Harvard, Pennsylvania, and New

York), and a private medical college (1—Grand Rapids) or was a university-affiliated state school (1—Cornell).⁴ Numbers of graduates from the separate veterinary colleges for the year were 76, and from all other categories, 55.

Reorganization for Educational Improvement: AVMA Committee on Intelligence and Education

Suddenly, despite a growing prosperity for the veterinary practitioner and the diversification of veterinary medical practice in a multitude of new endeavors, there was the announcement that Harvard University Veterinary Department would soon close.⁴⁷ "It seems an ugly blot on the escutcheon of veterinary medicine in America for such a school to close when so many illegitimate institutions remain open and prosper" was what the national association's Committee on Intelligence and Education reported to the association in convention in 1901.⁴⁸ This induced renewed effort within the American Veterinary Medical Association to obtain improvement of the schools,⁶ working as it had done since the 1890s—through the media of new-member qualification requirements. Its Committee on Intelligence and Education was given new responsibilities and duties to undertake a leadership role for elevating the standards of veterinary medical education.⁴⁹ Preliminary investigatory activities were begun which, at first, were limited to scrutinizing school catalogues and studying replies to survey-form letters.^{22,50,51} When these catalogues and letter replies seemed to portray educational opportunities beyond schools' materialistic capabilities, the American Veterinary Medical Association in annual convention searched for the need and means of determining how well the schools of veterinary medicine were doing to qualify the graduates for association membership and to what extent the schools were (as a matter of professional ethics) satisfying the obligations such as they were making in their advertisements, public announcements, and school catalogues. The committee's work led in 1906 to the conduct of on-site inspections of the schools, the actual inspection being done by association members expressly designated by the president of the Association.⁵²

Ten or eleven of the schools of veterinary medicine in the United States were visited during this first-ever on-site inspectional program; among the privately owned ones, only the Chicago, Kansas City, Indiana, McKillip, Cincinnati, and St Joseph (Mo) veterinary colleges were inspected. The last two had opened in 1900 and 1905, respectively.⁷ (After this, only 3 more private veterinary colleges were established: in 1909, Terre Haute (Ind) Veterinary College and Southwestern Veterinary College (Dallas, Tex), and in 1913, Arkansas Veterinary College (Fayetteville).

On the basis of what the committee reported and

⁴By 1900, 11 private veterinary colleges had disappeared from the educational scene, in addition to 6 or 7 schools of veterinary medicine of the other categories.

recommended in 1906, the American Veterinary Medical Association in the meeting at the next year's convention developed a list of "veterinary colleges . . . endorsed by the Association . . . as qualifying graduates for eligibility to membership in the Association."^{23,53} Of the active commercial veterinary colleges, only five were listed: Chicago, Kansas City, Indiana, McKillip, and Cincinnati, (A few others of the same category but no longer active were included.) Thus, the accrediting of United States veterinary medical educational institutions had gotten started—by voluntary activity and with independence from government (federal, state) control.¹⁷

These actions (ie, school inspection and promulgation of an approved list) by the American Veterinary Medical Association came just as the gradually growing consumer demands for pure food laws and a proper national meat inspection system had reached peak. Also, Upton Sinclair's novel, *The Jungle*, had appeared (1906). In the subsequent federal investigation of the conditions in Chicago abattoirs and stockyards, the special committee which had been appointed by President Theodore Roosevelt did not let escape the opportunity to test whether Bureau of Animal Industry veterinarians were in fact qualified by educational experience to inspect meats, as a matter of public policy, and to engage in the practice of public health meat hygiene.^{23,54} They were qualified!⁵⁵ Then, in the same month that the President's investigatory committee report was forwarded to the US Congress, the nation got the comprehensive Meat Inspection Act, approved June 30, 1906.

US Department of Agriculture's Inspection of the Veterinary Medical Schools, 1908—A Landmark Action

The US Department of Agriculture thought it was worthwhile to continue the on-site inspections in view of the tremendous expansion and increased responsibilities and activities pertinent to the Meat Inspection Act of 1906. Hundreds of veterinarians were being examined for federal employment. To ensure that these were professionally qualified by appropriate education, the US Secretary of Agriculture formed a select committee of education which then proceeded to visit 18 schools of veterinary medicine (plus 1 in Canada).^{7,23,56} This was in the spring months of 1908.

In the committee's report which was made to the US Secretary of Agriculture and approved June 8, 1908,^{56,57} only 4 of the active private veterinary colleges were included on the list of schools recommended as class A (Chicago, Kansas City, Indiana, and San Francisco veterinary colleges). Their graduates were eligible to enter the US Civil Service

⁵³Such a listing by the Association was discussed at the 1893 annual meeting (*USVMA Proc 30th Annu Meet Chicago, 1893, p 203*). Note: The term "endorsed" to define a qualifying school in 1907 had no specially assigned meaning, because equally expressive were such terms as regularly organized and recognized (1893), established and reputable (1879), well-recognized (1917), approved, and accredited.

examinations for employment in the federal agricultural Bureau of Animal Industry. Three others were designated class B (McKillip, United States, and Cincinnati veterinary colleges). Remarkably, of these seven, five had been in the 1907 listing of schools "endorsed" by the American Veterinary Medical Association,⁵³ but as will be seen later, the failure by a given educational institution to gain entry on to 1 or both lists did not mean that the school would have to stop operations, even when it chose not to make changes in order to become eligible for listing.

There was opposition, of course, to the grading, or classification of the schools (classes A, B, and C), since the whole affair was considered by some as an encroachment on education by the Federal government.^{56,58,59} Nevertheless, the American Veterinary Medical Association in convention in 1908 generally endorsed the US Secretary of Agriculture's approved report for the long-term beneficial effects that it might exert on the nation's veterinary medical educational system.^{59,1} Beside the classification, the government report had 27 recommendations on how schools of veterinary medicine might operate (eg, matriculation standards, faculty composition, attendance records, course length) and on the subject content of the courses which might be taught. The US Department of Agriculture Bureau of Animal Industry *Circular 133*, dated July 6, 1908, which had been promulgated to include these recommendations, was rewritten a year later in the form of 19 numbered regulations (*Circular 150*, "Regulations governing entrance to the veterinary inspector examination," dated Sept 1, 1909), which then became the criteria used by the Federal bureau to evaluate veterinary educational institutions for many years.^{56,60} Also, *Circular 150* was adopted by the American Veterinary Medical Association upon its resumption of the school inspection program in 1912,²² and in the next year, the circular was made a reference standard in the association's bylaws pertinent to listing the schools of veterinary medicine which were approved as new-member sources.⁶¹

New Outlook for Educational Institutions (Research, Service) Add to Problems of Staying Open

At about this time, veterinary medical associations—understandably becoming concerned by recent events on the urgent needs for well-educated veterinarians to help both in advancing the agricultural economy (animal disease control, research) and in contributing to the safeguards of the public health—spoke out for federal and states' money-support for veterinary medical education. Why should the financial burden for this essential education veterinary product rest forever with the relatively small commercial veterinary colleges?⁶² A few agricultural leaders and state legislators seemed inclined to provide answers to this question, but in 3 states that already had the veterinary

colleges, the following occurred. (i) An attempt was made in Illinois to establish a Chicago-based school of veterinary medicine (namely, the proposed Union Stock Yards Veterinary College) as an extension of the University of Illinois, a land-grant agricultural college.^{7,63} (ii) In Michigan, a school of veterinary medicine (as the Division of Veterinary Science) was opened at Michigan Agricultural College (at East Lansing), also a land-grant.^{28,29} And (iii) in 1913, the New York University's old New York-American Veterinary College was reorganized and given the name New York State Veterinary College, with medical orientation at New York University⁷—this lasting until 1922.

None of these responses was vitally encouraging to the commercial veterinary colleges. Certainly, the general feeling in these states must have been that the latter lacked most everything needed to conduct a professional curriculum and that they were not attuned to the trends which had added agricultural veterinary medical research and public service to the teaching tasks in the land-grant agricultural colleges. These, unlike the commercial enterprises, had become the enviable recipients of federal-state appropriations under 3 major US laws—the Hatch Experiment Station Act of 1887, the Second Morrill Land-Grant Agricultural College Act of 1890, and the Smith-Lever Extension Act of 1914.^{14-16,20,64}

Decision on Two Academic Problems: College Entrance Requirements, Length of Curriculum

Throughout these years of veterinary educational development, several academic problems remained unanswered. The 2 principal ones were (i) scholastic requirements which should be imposed upon new students matriculating in the schools of veterinary medicine and (ii) length of the professional curriculum. Neither one had been more than scantily examined in the early 1900s, although in a few of the schools (mainly those in the land-grant agricultural colleges and universities, the 4-year veterinary curriculum was being adopted. On the matter of matriculation standards, the American Veterinary Medical Association in convention in 1905 already had expressed an opinion "that there should be a minimum requirement of a high school diploma or its equivalent in an English education for entrance."⁶⁵ This was a higher matriculation requirement than was being used at the schools of veterinary medicine accredited by the US Department of Agriculture-US Civil Service Commission,⁵⁷ and it exceeded the minimal standards that had been discussed in 1907 for adoption by the Association of Veterinary Faculties and Examining Boards of North America,⁶⁶ which most often represented the views of the numerically dominant private veterinary colleges.

Significance of the differences in these 3 matriculation standards comes with the understanding that at this moment in the development of the

¹Interestingly, at this time, there were about as many veterinarians on the membership list of the American Veterinary Medical Association as were employed by the US Department of Agriculture, that is, about 800 each.

American public school system, there were few public high schools.¹⁴ The professional schools of veterinary medicine—no different from the medical colleges of the period⁶⁷ and most other institutions of higher education¹⁵—were not reluctant to examine the applicants, substituting their own tests for “equivalency” to applicants who had not had formal high school education or had not graduated from high school. In some way, applicants had to be found to fill the 1st-year student classrooms and lecture halls. One veterinary educator (in 1909)⁶⁸ observed that “at least fifty per cent of men knocking at the doors of veterinary colleges have not one unit of credit for admission, yet most of them are admitted by examination . . . a goodly number have never reached the eighth grade in the public schools.” And another (in 1907)⁶⁹ thought that “the stringent enforcement of such requirements would be a deathblow to twelve of the existing colleges.”

Nevertheless, the American Veterinary Medical Association in annual meetings moved ahead slowly, trying to do what it had done earlier: It would continue to upgrade the educational specifications of new-member applicants. In a major effort to rewrite the “rule of 1893,” the proposal was made in 1910 to limit association membership in the future to graduates of schools of veterinary medicine which after 1913 would enroll only students having at least 2 years’ high school education and which would lengthen the course (from the presently accepted 18 months over 3 annual sessions) to 24 months.⁷⁰

In subsequent convention-floor discussions of pertinent portions of the association’s constitutional documents,⁶⁹ the effective date for the 2-years’ high school prerequisite was deferred to the 1918-1919 academic year and the length of the curriculum was re-adjusted (that is, shortened) to 21 months and then to 19.5 months. (The 4-year professional curriculum was made mandatory for association-approved schools of veterinary medicine beginning with the 1916-1917 academic year.⁷¹) Throughout this period, there was little improvement in the school standards, because of the opposing arguments and convention-floor maneuvers from the private college owners and faculties, who represented nearly half of the number of educational institutions and possessed 70% of the veterinary student enrollment. Their total graduate output at the 1910 spring-summer commencements was 547 (vs 214 graduates from schools of veterinary medicine in the other categories).

Thus, successful in their efforts to keep the educational requirements of new-member applicants to the American Veterinary Medical Association relatively low, the commercial veterinary colleges then proceeded to upgrade their own facilities and programs enough to gain entry to the association’s list of “approved” schools of veterinary medicine. Nine private veterinary colleges were put on the new 1913 list: Chicago, Kansas City, Indiana, McKillip, United States, San Francisco, Cincinnati, St Joseph (opened, as already mentioned, in 1905), and Terre Haute (opened in 1909).⁷²

Beginning Phase of New Failures of Colleges

After 1913, progressively fewer of the independent veterinary colleges were accredited by the American Veterinary Medical Associations as new-member sources. At the Association’s annual meeting in 1917, the San Francisco Veterinary College and the United States College of Veterinary Surgeons were removed from the list.⁷³ Concurrently, there was almost no change in the number of schools of the other categories on the list. At next year’s annual meeting (in 1918), another 2 failed to be listed—these being reported as “out of business,” namely the 26-year-old Kansas City Veterinary College and the relatively new Terre Haute Veterinary College.⁷⁴

A veterinary college’s failure to gain a place on the accredited list or its loss from a listing was not the decisive criterion on whether it stayed open. The San Francisco Veterinary College, for example, remained open another year after it lost accreditation listing (and then went “out of business”), and the United States College of Veterinary Surgeons which was similarly unaccredited, lasted until 1927. Additionally, there were 2 private veterinary educational institutions that throughout their active period never gained accreditation status as new-member sources for the American Veterinary Medical Association. They were the last independent veterinary educational institutions ever to open: Southwestern Veterinary College, in Dallas, which had opened in 1909 and then ceased operations in 1916; and Arkansas Veterinary College, in Fayetteville,⁷⁵ which had opened in 1913 and closed in 1921. There were employment opportunities for graduates from these nonlisted institutions and many were found to qualify to enter into private practice in certain states.

Wartime Influences on the Commercial Veterinary College

The closures of the last-named independent veterinary colleges (namely, Kansas City, Terre Haute, and San Francisco) were attributable mainly to the disruptive wartime economy and the diversion of the flow of student-age manpower into the American armies fighting in the First World War. But even so, the remaining schools were exposed to new impositions to upgrade their operations for educating veterinarians. The Army Veterinary Corps, a corps of United States commissioned officers, had just been created by the US Congress (National Defense Act, approved June 3, 1916) and made a part of the Army Medical Department.^{22,40} (At peak strength, 2,234 veterinarians were in active military service.)

After the inauguration (in the fall of 1917) of the Army Medical Enlisted Reserve Corps—a program to retain and continue draft-eligible students in qualifying educational institutions (medical, dental, and veterinary)⁷⁵—the War Department, in conference with the American Veterinary Medical

Association and the federal agricultural Bureau of Animal Industry, agreed to the principle that it would label as "well-recognized" those schools of veterinary medicine which would adopt the following matriculation requirement: For the 1918-1919 academic year, 2 years' high school education "or their equivalent as certified by the Commissioner of Education or a similar official in the state where the student resides."^{74,76} The requirement in its quoted part threatened the continued existence of many commercial veterinary colleges, because they would have to stop their long-standing abusive practice of under-evaluating educational equivalence.⁷⁷ Instead, on the insistence of the War Department (namely, the Surgeon General, US Army), states' educational officials would determine equivalency—even conducting their own examinations of veterinary school matriculants who had not in fact attended a bona fide high school. Merillat and Campbell⁶ wrote about the importance and effect of the War Department action, as follows:

There is no denying that the World War was the downfall of the proprietary veterinary colleges which up to that time had furnished the large majority of our college-trained veterinarians, and that the action of the Surgeon General was the starting point of a reform which might have taken years to bring about through civilian influences. The attempt to raise the standard of matriculation, begun in the 1870's, was more affectatious than earnest, and although considerable headway was made before the World War, it was never difficult until then for insufficiently educated men to enter some veterinary college which, on one pretense or another, was listed among the accredited schools.

At the war's end, the American Veterinary Medical Association in the annual meeting again revised its internal documents (or constitution and bylaws) on new-member qualification requirements. Accordingly, the schools which were to be approved as new-member sources would accept only matriculants who had at least a full 4-years' high school work or equivalent studies taken in preparatory schools, beginning with the 1919-1920 academic year.⁷⁸ Three of the private veterinary colleges seemingly felt that they could not continue to stay open, especially in view of the overall postwar decrease in new-student enrollments (down for all schools, by about 34% over the last 5 years). Therewith, they were deleted from the approved list in 1919, as follows: the 27-year-old McKillip Veterinary College and the Cincinnati Veterinary College—both closing a year later—and the St Joseph Veterinary College.⁷⁹

Final Years, 1920-1927

In the immediate postwar years, the last of the private veterinary colleges were scarcely viable (Fig 1). Beside the closures of McKillip and Cincinnati veterinary colleges in 1920, the oldest and most productive one in veterinary medical educational history ceased operations: the Chicago Veterinary College.⁸⁰ Then, Indiana Veterinary College was left as the only private school of veterinary medicine

approved by the American Veterinary Medical Association, along with 11 university and agricultural college-based schools; it closed in 1924.⁸¹ It was already evident that the broadened educational needs of the veterinarian in the 1920s would be poorly served by these institutions which could not or would not change.⁸² Certainly, few privately owned colleges could have qualified after 1921 when the American Veterinary Medical Association adopted the guide which would be used during school inspections by the Committee on Intelligence and Education, namely the *Essentials of An Approved Veterinary College*.^{22,83} But even were they found to be in compliance with these standards, many of the colleges would have had difficulty at this time in obtaining enough students to make veterinary educational activities financially profitable. For the 1921-1922 academic year, for example, 1st-year student enrollment in the 12 approved US schools of veterinary medicine numbered but 151, and the total student population in them was 622.⁸⁴ (These data included Indiana Veterinary College, with 9 first-year students and 73 total student population.) This low enrollment lasted through the 1920s.

The remaining independent veterinary colleges gradually stopped operations, as follows: Arkansas, in 1921; St. Joseph, in 1923, and finally United States College of Veterinary Surgeons, in 1927.⁹

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