two decades. Twenty years later, when Salmon wrote his history of veterinary research of the time, he did not mention Detmers.°

10. AGRICULTURE AND VETERINARY SCIENCE IN THE MIDWEST

Farmers College of Ohio was built on College Hill in the outskirts of Cincinnati in 1848. One of the first institutions of higher culture beyond the Appalachian Mountains, it was dedicated to the “practical character of its course of instruction.” Cincinnati, the first major inland city, was populated by Americans going west; it lacked the immigrants ballooning eastern cities. It was the boomtown of mid-America, the sixth largest city from 1840 to 1860. Known as “Porkopolis,” its agricultural and meatpacking industries flourished before being replaced by Chicago and St. Louis.

In 1848, two years after statehood was granted, the Iowa Legislature petitioned the U.S. Congress to grant the state Fort Atkinson—buildings and two sections of land in Winneshiek County—for an agricultural college. Completed only four years previously to protect the Winnebago Indians in their migration from Wisconsin to Nebraska, Fort Atkinson had been disenfranchised. But the fort was assigned to the Iowa Volunteers military unit, not for an agricultural college.°° It was officially abandoned on February 14, 1849, at the start of the Mexican-American War.

By mid-century, several states began to see the enormity of agriculture’s economic impact and a need for encouragement. In 1855, state legislatures chartered the Agricultural College of the State of Michigan and the Farmers’ High School of Pennsylvania. Opened under a new name in May 1857, Michigan Agricultural College was a model of success.°°° In Iowa, a bill founding a state agricultural college was signed by Governor Ralph P. Lowe on March 22, 1858, the charter being for an “Iowa Agricultural College and Model Farm.”°°° Story County was selected as the site the next year, and the first building, Farm House, was completed in 1861. Then came the passage of one of the most effective acts ever passed by the U.S. Congress.

To address agricultural issues, the Land-Grant College Act, written by Justin S. Morrill of Vermont, chairman of the U.S. House Agriculture Committee, included provisions for teaching veterinary science as part of agricultural
education. The bill, after passing both houses of Congress, had been vetoed by President Buchanan. The same bill was reintroduced in 1862 and by July 2 became law when signed by President Lincoln. The Act granted huge tracts of federal land to develop agricultural colleges. It was an astonishing stimulus for higher education in all states and territories, but it was the expanding agricultural lands that reaped the greatest benefit. The tallgrass prairies of Iowa, the Great Plains of Kansas and the Nebraska Territory, the Southern Seaboard, and the Palouse lands spreading south from Spokane had rapidly expanding livestock industries and took advantage of the bill’s provisions for teaching science to agriculture students. Five years later, twenty-two colleges and universities were offering instruction in agriculture.

The Iowa Legislature was one of the first to accept the land grant provisions. Approved in 1862, the Iowa Agricultural College and Model Farm became an operating land grant institution two years later when the General Assembly awarded it the state’s land grant charter. The Land Grant Act provided 2,400,000 acres of federal lands in Iowa for the college; rented, the lands earned 8 percent on an appraised valuation of $1.50–$3.00/acre—income that went to the college. An effort to repeal the state law that established an agricultural college failed and was followed, in 1864, by a proposal to divert the granted lands from the Iowa Agricultural College to increase the endowment of the state university with conditions that would satisfy the Land Grant Act—that the university establish a department of agriculture, an experimental farm, and an agriculture course. The proposal did not succeed.35

In 1867, the new Iowa Agricultural College Board of Trustees’ Committee on Organization and Selection of Faculty traveled east to evaluate a dozen of the “best schools of agriculture” and to solicit names for president and professors.36 To the committee, Michigan Agricultural College had the most appropriate curriculum, with a balance of science and practice. President Williams cautioned that his college suffered a conflict with Michigan state legislators about whether the school should emphasize cultural education as well as practical labor. He recommended Adonijah Welch, teaching in Ypsilanti, as a presidential candidate who could defend science and education in Iowa.

There were no provisions for veterinary science in Michigan Agricultural College’s curriculum, but the plan did include a future course for agriculture students in animal physiology with anatomical dissections and microscopic examination of tissues. The committee noted that the college was three miles
east of Lansing on 676 acres of dense forest and believed its “isolated, natural wilderness a serious misfortune.”

The next stops had programs that resembled Michigan: Pennsylvania Agricultural College, which opened February 1859, and Massachusetts Agricultural College close to Amherst College, which had been organized the previous October. The committee was much impressed with plans for the Agricultural College at Cornell, which was not fully organized yet had an excellent design with a high chance of success given its gift of over $500,000 from Ezra Cornell.

The board also visited—but disapproved of greatly—the Sheffield Scientific School of Yale College. Yale had received large agricultural college land grants but ignored agriculture: “they make no pretensions to having an agricultural college; the faculty are unbelievers in the idea of manual labor in connection with acquiring a college education”; there was “no attempt to give the student any of the practical application of the theories taught.” Decades later, the Connecticut Legislature stripped Yale of its land grant status and gave it to the state’s university.

At later stops, Harvard University, Columbia University, the Smithsonian Institution, Lehigh University, and Farmers’ College in Ohio fared little better with the committee. Before returning home, the committee met with Horace Capron, commissioner of agriculture, in Washington, D.C., the president of the Ohio Pomological Society, and editors of *Prairie Farmer* and other farm journals.

Returning home, the board selected Adonijah S. Welch as president of Iowa Agricultural College. Then principal of Michigan Normal School, he left for Ames—transported from train station to the college farm in a mule-drawn wagon. Within a month, Welch took the train east to “buy a library” and to hire Norton S. Townshend as professor of practical agriculture. Norton, a physician turned farmer and agriculturalist, was the director of the Ohio State Board of Agriculture.

The new College Building at Iowa Agricultural College was dedicated on March 17, 1869. The first official class of twenty-four men and two women entered the four-year course of study that year. The inaugural speech by President Welch was devoted to the need for education of women, and the response by Professor Townshend echoed the importance of women: “... the feet of our
pupils are not to be tortured or dwarfed by the Chinese shoe of sectarian limitations.”57

Charles Bessey, a specialist in poisonous plants, was hired that year as professor of botany, zoology, and horticulture. A prosperous farmer from Mount Pleasant, Iowa, Isaac Phillips Roberts, was appointed farm manager. Roberts turned out to be an extraordinary agriculturalist and, despite no academic degree, was appointed professor of agriculture when Townshend resigned the next year. Roberts moved as a young man to Cornell University where, as head of a newly formed Department of Agriculture, he oversaw the veterinary work of James Law.58

Turns out, both Adonijah Welch and Norton Townshend were strong proponents of science, and their influence was critical in driving a college of veterinary medicine in Iowa. History does not make clear whether Welch convinced Townshend of the merits of science for veterinarians, the influence went in the other direction, or their stance was arrived at independently—nor does it explain why Townshend left Iowa after one year to return to Ohio Agricultural and Mechanical College as the professor who would engineer a college of veterinary medicine in Ohio.

**OTHER NEW LAND GRANT COLLEGES** began a scramble seeking formally educated veterinarians to teach veterinary science to their agriculture students; funds for a professor of veterinary sciences were added to the college budgets. Between 1868 and 1873, the agricultural colleges of Iowa, Kansas, Illinois, Ohio, and Massachusetts established veterinary departments in which veterinary science was taught to agriculture students by veterinarians.

In the next decade, agricultural interests often worked against professional veterinary medicine in several states. Veterinary departments established in agricultural colleges in Maryland, Connecticut, and Pennsylvania were dedicated solely to the education of agriculture students; the goal was to make every agriculturalist their own animal doctor, even counseling them to seek a state veterinary license. Some states—Nebraska, Illinois, and North Carolina—even amended their veterinary practice act to include agriculture graduates that had taken veterinary science courses in college. But in the heart of the Midwest livestock belt, legislatures in Iowa, Ohio, Michigan, and Kansas moved to create schools dedicated to veterinary medicine.
In the first years few students would enroll in the agriculture curriculum, and there was criticism of the new college from politicians and agricultural writers who tried to make it appear that agriculture was discouraged by college administrators who, they wrote, were attempting to transform agricultural studies into a liberal education. The truth was that few farmers had faith in a need for scientific agriculture and home economics for survival in farm and home; they would not send their children to college to study what they viewed as manual labor.

What the criticizing politicians and editorialists did not see was that farm people would send their children to seek the kind of broad education that would enhance their value and earning power and give them greater opportunities. It was fortunate that Iowa Agricultural College president Welch had the greater vision for the future of agriculture and veterinary science and that he was supported strongly by the governors of the state of Iowa. Theologian Welch, New York farmer Ezra Cornell, and Philadelphia publisher Joshua B. Lippincott are too often overlooked as visionaries in the founding of veterinary medicine.

The original bill founding the Iowa Agricultural College had included provisions for teaching courses in veterinary science to agriculture students. President Welch reported in 1871 that “the seniors of the agricultural course will need a professor . . . who will give lectures on comparative anatomy and physiology and veterinary science.” One year later, Dr. H. J. Detmers was appointed as the first professor of veterinary science in the Agriculture Division at the Iowa Agricultural College.

The stimulus for formal veterinary schools that arose in the Midwest came from a feisty German immigrant, Heinrich Janssen Detmers, who scattered seeds of European animal husbandry and veterinary science throughout Illinois, Missouri, Kansas, Iowa, and Ohio. The son of a farmer from rural Oldenburg, Detmers had matriculated at the nearby Royal Veterinary College in Hannover, then one of the best veterinary schools in Europe. He spent two years there and a final year at the Royal Berlin Veterinary College, graduating in 1859. In Berlin, veterinary professors Schütz and Ostertag had worked and studied under Virchow, and Detmers was exposed to the best German veterinary science.

In the scientific milieu of Berlin, the medical pathologist Rudolf Virchow, viewed as the greatest physician for three decades, had turned his attention to disease control on the farm as the means to stop bovine tuberculosis, anthrax,
and other dreaded diseases of livestock that were transmissible to humans. Virchow recognized that many of the contagious diseases in rural Prussia could be reduced by having competent veterinarians that were responsible under law to control animal disease on the farm. He was a political force in licensing of veterinarians and veterinary inspection of meat. He also pushed for on-farm control of disease by mandating that autopsies on animals be done by licensed veterinarians trained in pathology. It was this fertile science ambience created by Virchow’s precision and skill that formed Detmers into the extraordinary analytical scientist he was. Perhaps it was also the dogmatic academic climate in Berlin that made him arrogant and unwilling to suffer laggards.

Detmers passed the state veterinary examination in his native Oldenburg and practiced veterinary medicine in his home village of Stumpens for three years. Accepting the chair of stock breeding and veterinary science in Neuenberg, in the Grand Duchy of Oldenburg—the salary was small—he soon asked to be relieved of his position to return to practice. The request was denied. There was turmoil in the rural areas. Kaiser Wilhelm and the new Prussian prime minister, Otto von Bismarck, were on their way to reunify Germany and had just forced Oldenburg into a North German Confederation, and it appeared that a Franco-Prussian conflict was in the works—it was a dangerous time for a young man in Oldenburg. There were extraordinary opportunities for graduate veterinarians in America, but it was a dangerous time there too.

When the American Civil War ended in 1865, Detmers emigrated with his three children, establishing himself as a veterinarian in Dixon and then Quincy in Illinois. Both towns had railroads that would take Detmers to Chicago and back. His formal degree and German scientific background gave him prominence in the Midwest. While practicing veterinary medicine he also wrote about animal disease and science for the Chicago Tribune and edited the veterinary department of Farm and Fireside, an agricultural weekly. Detmers had already had that experience in Neuenberg and, connecting in 1869 with the Industrial College of Illinois, now the University of Illinois, he taught veterinary science and stock breeding for two years. He also lectured at the University of Missouri.

On March 8, 1872, Detmers was appointed to the chairs of veterinary science and German at Kansas State Agricultural College—the first veterinarian on the faculty. The 1871–1872 Kansas State catalog lists eleven faculty including President Denison and one “Professor of Veterinary Science and Animal
Husbandry, H. J. Detmers, V.S. ” Detmers proposed that his daughter, Jenny, could teach German and chemistry the next fall and winter at his expense, provided that he was granted a leave of absence from July to November 1872 to deliver lectures at the Iowa State Agricultural College; his offer was accepted by the Kansas State Agricultural College Board of Trustees.

On the Manhattan campus Detmers taught anatomy and physiology to freshman agriculture students and taught breeds of horses and other animals to sophomores, pathology to juniors, and veterinary jurisprudence and pharmacology to seniors. He also ordered the first workable microscope from Germany. Astonishingly, Detmers had developed a curriculum for a veterinary school but no one seemed interested.

The Kansas State Agricultural College president at the time was focused on the move to the new one-hundred-acre site of its present campus and constructing the first building (it was called Farm Machinery Hall). The college was under fire from legislators in Topeka for not fulfilling its mandate for agriculture and mechanical education and for deviating from its trade school mission. In the spring of 1873 a new Board of Regents appointed by the governor removed the Kansas State president and appointed John A. Anderson to the office. There was a delay since, by the rules, the new Board of Regents for Kansas could not be confirmed until January 1874. In the meantime, Detmers and two other faculty who opposed the board and disagreed with Anderson’s trade school ideas on education went to Topeka to oppose the confirmation. They were not successful. When the Board of Regents was confirmed, Detmers and the two other faculty members were dismissed for “insubordination and gross misconduct”— and not even permitted to complete the work of the college year. From 1874 to 1888 there was no veterinarian on the Kansas State Agricultural College faculty.

In May of 1872, Detmers moved to Ames to teach agriculture students beginning in the fall term. He agreed to teach seniors pathology, comparative anatomy, and physiology. Two of his students, Cessna and Dietz, left descriptions of Detmers’s instruction: “It was of the highest type and lectures were precise and scholarly.” Detmers was a short, stocky man with poor vision. Cessna’s notes tell us that he “was a typical German with all the personal qualities such a man is supposed to have—officially gruff, positive, intolerant of opinions different from his, even somewhat quarrelsome, socially pleasant, accommodating, a good fellow generally.” His English was broken. Discussing a certain disease
of the bones he had said about the animals, “Und dey die shust like de vlies” and their bones “wouild prake shust like izzigles.” With students, Detmers was genial and friendly and his hearty laugh and cordial manner made students “feel at home” in his lectures. But he was gruff, and harsh on students who did not perform. He was even more outspoken and harsh to college administrators who did not support science. Detmers had a tendency to be irascible and snarky—characteristics that caused him grief several times and probably was responsible for his many moves. Teaching at Iowa Agricultural College for only a short time, he left an astounding science legacy in one of his agriculture students, Millikan Stalker. Detmers moved on to work for the Bureau of Animal Industry and to be the founding dean of the veterinary school at Ohio University.

OLOF SCHWARZKOPF, A GRADUATE OF THE Imperial Veterinary College in Berlin, followed Detmers’s wanderlust. Arriving in New York City in 1885 as an assistant to Frank Billings, he enlisted in the Army the next summer when Billings left for Nebraska. Assigned to 8th Cavalry, he was on the overland march from Texas to South Dakota. In 1889, Schwarzkopf was hired as professor of veterinary science at the University of Minnesota; a veterinary curriculum was established with twenty-one students enrolled in a three-year program that was abandoned in 1892 “due to high costs.” Schwarzkopf moved to Chicago as dean of McKillip College of Veterinary Medicine and in 1897 to New York City as professor at the American Veterinary College. In 1900 he reenlisted in the 3rd Cavalry, rising in rank and playing a major role in attempts to control infectious diseases that ravished the Army horses. Assigned to the Philippines during the Spanish-American War, he spent the last years of his career in Fort Riley, Kansas. Schwarzkopf had the most index citations in the American Veterinary Review—excepting editors Liautard and McEachran—many of them translations of German scientific papers. He retired in Germany and died on June 3, 1923, in Wiesbaden.