



# THE GREATEST UNDERTAKING

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THE UNIQUE HISTORY OF THE NEBRASKA FOREST SERVICE

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University of Nebraska-Lincoln

2017  
University of Nebraska, Nebraska Forest Service  
Lincoln, NE

To mom and dad.

You have always provided the love and support necessary  
for Tim and I to be the best of who we are.

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# INTRODUCTION

I always tell my East Coast friends that we do have a State Forester in Nebraska and that he is in charge of both of Nebraska's trees, each of which is a state park. I always plead guilty to the suggestion that the Nebraska State Tree is the fence post.<sup>1</sup>

-Roger Welsch, 1982

Local folklorist Roger Welsch was humorously alluding to a sentiment held by many across the nation. Why does Nebraska, a place best known for flat agricultural land, whipping winds, and rolling Sand Hills need a State Forester, or a Nebraska Forest Service (NFS)? In order to answer this question, one must understand something about, of all things, Nebraska Cornhusker football.

Just twenty years after the 1869 founding of Nebraska University (now the University of Nebraska at Lincoln), the boys played football, and played it successfully. Twenty-seven out of the first twenty-eight years with winning records, numerous conference titles, and unbeaten streaks climbing into the twenties and thirties. How did this land-grant university, this "Prairie" university, build itself into a national football power? It had, and still has, many inherent disadvantages: low population, cold weather, and a remote location. But Nebraska committed the resources to build an impressive stadium and training facilities. The fans were determined to leave their farms for the day, put on their scarlet and cream, travel to the "big city", and spend their hard-earned money on tickets and souvenirs. And the players threw themselves into their grueling, sweaty workouts, hoping they would find the playing field on Saturday and become a state hero. In other words, Nebraska football became great because they *wanted* it.





*Newly planted trees at Butcher family homestead claim, Custer County, 1888*

This same spirit of determination and desire is the reason forestry in Nebraska has thrived in its unique way—because Nebraskans *wanted* it. Pioneers of the mid-nineteenth century moved into what was popularly known as the Great American Desert, and they rolled the dice that this semi-arid land, seemingly incapable of sustaining trees, could somehow grow crops. After winning that gamble, the settlers yearned for the trees they had grown accustomed to in the Eastern United States and their European homelands. They missed the beauty of the wooded areas and the respite of a shade tree. Moreover, they needed windbreaks to slow soil erosion and crop damage. Homesteaders would take advantage of timber claim opportunities and plant trees 40 acres at a time. Nebraska would become the “Tree Planter’s State”, and J. Sterling Morton would found Arbor Day. Nebraskans would also toil in their own blood and sweat to create the nation’s largest hand-planted forest reserve. Through obstacles both natural and man-made, forestry activities have continued for over 100 years in one form or another. The pioneering foresters of the twentieth century could little predict what would evolve from their efforts. This is a story of steady determination, daunting undertakings, and great achievements. It is the story of the Nebraska Forest Service.

CHAPTER ONE

# PLANTING THE SEEDS

(1902 - 1915)

I would suggest that this reserve [the Nebraska Forest reserve] should be visited by the many Nebraskans who are actively interested in the work of tree planting. It is to be the greatest undertaking in the tree planting line that was ever attempted in this country.<sup>1</sup>

-Charles Bessey, 1902

Long before there was any official state forester position or department, forestry work was conducted within the Nebraska borders by the US Forest Service and one man in particular, Dr. Charles E. Bessey. Bessey came to the state in 1884 as Professor of Botany and Horticulture and Dean of the Industrial College at Nebraska University. With an ingratiating personality and indomitable energy, Bessey transformed the entire agricultural program and focused much of the school's activities on experimentation and research.<sup>2</sup> Such intellectual curiosity also extended into forestry.

Bessey was convinced that with proper care and the correct species, trees could be successfully grown in the arid environment of the central and western Nebraska Sand Hills. The idea of a man-made forest grew as he travelled across the region. Lonesome ponderosa pines and red cedars whispered what might be possible. He campaigned hard for the project in newspapers, academic settings, and public presentations. After five years of dogged effort, Bessey broke through, aided by the passage of the Hatch Act in 1891. This bill allowed the Federal Government for the first time to "provide money instead of land for the support of specific activities ... it spelled out the duties



*Charles Bessey,  
Professor of Botany and Horticulture*

of the experiment station” (Dean Bessey himself wrote this portion of the law.)<sup>3</sup> Subsequently, the Head of the Forestry Division of the U.S.D.A. approached Bessey about conducting tree-planting experiments in Nebraska. Bessey and Lawrence Bruner directed the project for the next ten years on the Bruner Family ranch in Northcentral Nebraska. Although the tree cover did not increase rainfall or decrease violent storms, as some had hoped it would, the very fact that they were successful in growing pines and Douglas firs in the sandy soil proved Bessey’s earlier theories correct.

Bessey and the Industrial College were now drawing national attention. In 1901 a contingent

of federal forestry officials and college students explored central and western Nebraska, measuring trees and sampling soils. After confirming what Bessey and Bruner had earlier found, President Theodore Roosevelt issued the proclamation that would create the Dismal River Forest Reserve near Halsey, Nebraska, and the Niobrara Reserve in Cherry County. “The entire expense of creating and conducting the forest reserves,” the U.S.D.A. stated, “will be borne by the government, but the department is willing to go still farther by assisting in scientific experimentation the development of the arid and semi-arid territory in every possible way ...”<sup>4</sup> Work could now commence on a grander scale.

Bessey and his colleagues had marshalled in a new era of forestry activity. Although officially administered by the Federal Government, much of the work planting and conducting experiments on the federal reserves would need to be done by students and professors from Nebraska University. When the reserves were founded in 1902, University forestry courses were considered merely a branch of Horticulture. With the advent of the reserves and the first Forest Service nursery in the nation, however, the need and desire for a robust and independent department was undeniable. Bessey and other members of the Industrial College lobbied the Chancellor and the Board of Regents for a budget for such a department, and in the spring of 1903, the Nebraska University Forestry Department was officially formed.<sup>5</sup>

The need for a separate department for forestry may have been obvious, but its creation would not be easy. The first forestry courses ever offered in the United States had been at Yale University a mere thirty years prior. The field was fledgling, and it would be hard to secure professors to fill the Department. Fortunately, Bessey had contacts around the small forestry community, and had recently met a rising star with a keen interest in the goings-on in Nebraska. Frank J. Miller,

graduate of the Yale Forestry School, had been part of the 1901 federal contingent to Nebraska. On April 20, 1903, Bessey officially hired Dr. Miller as the first professor and Head of the Department of Forestry. Dr. Miller did not negotiate to increase his \$1,100 salary (which was apparently somewhat below comparable positions at other institutions); instead, he asked for a \$200 budget for apparatus for field and laboratory work.<sup>6</sup>

Instruction in the new Department began in September 1903. According to the Catalog of Classes for that year, the Technical Group in forestry (the name for the curriculum offered under the new Forestry Department):

...has been arranged in order to enable young men to fit themselves for practical work in forestry. The studies are largely biological, and much attention is necessarily given to plants in general and trees in particular. The soil in its relation to vegetation must receive considerable attention and the relations of climate and rainfall to the forest covering of the country are necessarily included. After the study of the underlying sciences the student is ready to take up technical forestry. During this course the student is given opportunity to spend one or more semesters in some of the government forest reserves, in order to gain additional technical experience.<sup>7</sup>

Students would be focusing on soil and rainfall factors, and spending considerable amounts of time experimenting in the unique environments around Halsey and Cherry County. Courses offered in the first academic year also displayed the breadth of the curriculum: Forestry, Dendrology, Forest Entomology, Silviculture, Diseases of Forest Trees, Study of Woods, Timber Physics, and Technical Forestry.<sup>8</sup> Professor Miller, Dean Bessey, and the Industrial College intended to mold these students into leaders in the forestry field. They also intended to offer assistance to any Nebraskan who expressed an interest in planting, protecting, and utilizing trees. The formation of this department in 1903 created an enduring link between forestry assistance activities and the University of Nebraska system, a link which exists to this day.

### **SPROUTING TO THE SKY**

The fledgling forestry department quickly proved to be one of the most popular offerings in the Industrial College. "Contrary to expectations," Dr. Miller wrote to Chancellor Andrews in 1904, "not only men from the first classes, but upper classmen as well have come into the work, so that at the beginning of the present school year, there were men in all four years of the course (25 total) ... thus it is that there is already a demand for more technical courses in forestry than

can at present be offered.”<sup>9</sup> In consultation with Bessey, Miller was authorized to hire another forestry teacher. By the end of the next academic year, the regents’ report announced that “that courses in Forestry, which have been in operation over a year, are proving popular, the likelihood being that demand for training in this interesting branch will increase in the near future, especially through the afforestation policy adopted by the National Government, which has already been put in operation within our State.”<sup>10</sup> Indeed, enrollment in the department increased 30 percent to 35 students between 1904 and 1908. These figures did not include the 165 agricultural students enrolled in the farm forestry classes. The confluence of superior instruction and the unique opportunities at the forest reserves had created a momentum that propelled the department into national prominence. Dr. Miller leveraged that momentum and decided to take a higher paying job with the federal government in the summer of 1907.

The future of the program was suddenly uncertain. The reputation of the Forestry Department and of Dean Bessey, however, was influential enough to attract another rising star in the forestry field. Dr. Frank Phillips, all of 26 years old, was a graduate of the Michigan Forestry School and had already distinguished himself working for Gifford Pinchot and the nascent U.S. Forest Service.

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*Nebraska National Forest, circa 1900s*

“With such an energetic person as he at the head of our department,” students wrote in their 1908 Cornhusker yearbook, “there is certainly an optimistic outlook for the future of this work here.”<sup>11</sup>

Professor Phillips, if anything, exceeded expectations. He went out of his way to set up students with summer internships and employment. “I have picked out two of the best men in the course,” he wrote to the Fairbury Nurseries, “and expect they will write to you this week informing you as to the date so which they can commence work.”<sup>12</sup> Every worthy student seeking forestry-related employment received opportunities at the Nebraska reserves or even out of state. In 1909, a graduate degree was added to the curriculum, requiring the completion of a fifth year of coursework, and one year of practical experience in forestry.<sup>13</sup> A demonstration sawmill, a 50 by 60 foot greenhouse, and 20 experimental acres on the state farm (today’s East Campus) added to the growing resources of the department. This department was becoming one of the best in the nation.

Phillips also regularly corresponded with citizens across the state, giving advice on what kinds of trees to plant in the sandy lands in the western portion of the state (jack pine, Scotch pine and western yellow or ponderosa pine), the best ways to control tree diseases and insect infestation, and how to use trees to slow soil erosion.<sup>14</sup> He was a one-man rural forestry program.

Further evidence of how the organization grew can be seen in the scholarly, yet often raucous, Forestry Club. Formed in 1907 by students of the department, it served both work and social purposes. “We regret that we are not able to reproduce here a group picture of the members of the club,” they wrote in the 1907 yearbook, “No photographer has as yet been able to do us justice.”<sup>15</sup> They also built a log-cabin clubhouse to engage in highly questionable activities. Academic results of the club, however, were undeniably admirable.

In 1909, the club began publishing a Forest Club Annual. “This book,” they wrote in 1910, “will contain articles on technical and practical forestry written by our student members and alumni, and is intended to be made up almost wholly of individual student articles ... In doing this work we are influenced strongly by the fact that many valuable and interesting observations are rendered non-available to foresters and forestry students because



*Forestry Club clubhouse*

1907 Cornhusker Yearbook  
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there is no place for their publication.”<sup>16</sup> Indeed, Nebraska University was the first school in the country to put out a technical forestry publication. The breadth of topics covered was long and diverse: forest planting, forest fires, the lumber business, “city forestry” (known today as Community Forestry), diseases and insects, the effects of grazing, etc. This Annual became a model for forestry schools nationwide to copy, including such venerable institutions as Yale and Michigan. “We are greatly interested not only in the subjects and the method,” wrote the Michigan Forestry Commission about the Forest Club Annual, “but in the artistic manner in which the program is issued.”<sup>17</sup> Nebraska had become a leading and innovative forestry department.

Still, was it possible for someone in Nebraska, an agricultural state, to make a memorable contribution to the field? Foresters in a prairie state were at a disadvantage and often felt defeatist.

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*Professor Frank Phillips*

“With that start the European foresters have on us,” wrote a USFS forester to Phillips, “it is going to be sometime before any American forester devises or discovers something so new that it is going to make him especially famous or sets the world on fire. In order to learn a little more about German progress in forestry, I have just about decided to look around some place for a buxom German girl who can do my translating for me.”<sup>18</sup> While that forester contemplated comfortable solace in a German Fraeulein, Phillips and his department were conducting unique experiments on shelterbelts. These studies would be invaluable twenty years later, when many people in the American Midwest were buried in the Dustbowl.

Indeed, Phillips and his department were making their mark on their field. The population of Nebraska began to see what forestry could do for the state, and calls for a State Forester position started to trickle in.<sup>19</sup> Perhaps this urging was prescient, but some people recognized early how the research being conducted within their state could benefit them.

## STORM CLOUDS

Nebraska’s forestry programs grew as strong as oak, but that was when they came to poach. Professor Phillips had been sought after before. In January 1910, he was offered a position with the US Forest Service, a position that granted control over several millions of acres of forest lands and a salary considerably exceeding his current pay.<sup>20</sup> He turned it down. He chose to keep building the program in Nebraska, seeing a future here for himself, his wife, and his newborn baby boy. Another year later, he received yet another offer. This was from the University of Michigan,

the place where he first fell in love with forests, and one of the few schools with a department that could rival Nebraska's. This offer was hard to turn down.

Dr. Phillips was torn. He contemplated the choice for weeks. Finally, on the evening of February 13, 1911, he made a decision which would change the trajectory of Nebraska forestry. His wife and 18-month-old son had fallen asleep in a screened sleeping porch, so he retired to the inner sleeping room to make the decision alone.

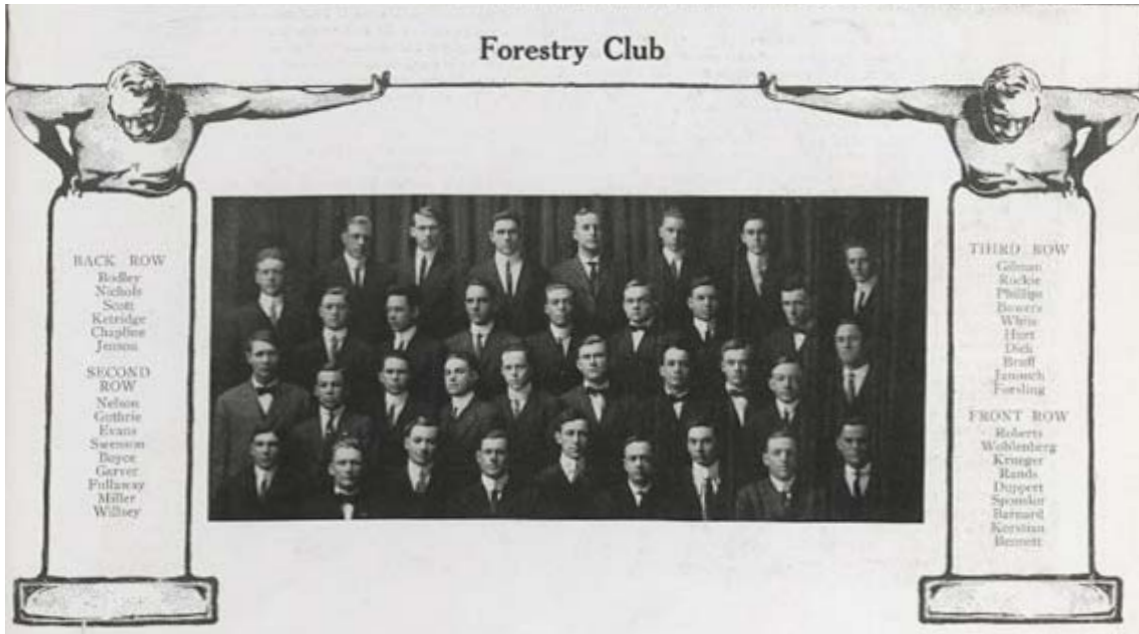
Mrs. Phillips awoke in the middle of the night with a vague feeling of uneasiness. She went indoors and found the sleeping room full of gas. "The professor had inserted one end of a rubber tube in the gas jet," reported the Lincoln Daily News. "The other end had been placed under the bed clothing ... it is believed that he soon succumbed to the gas."<sup>21</sup> Frank Phillips had been dead for several hours by the time a physician arrived. Mrs. Phillips was completely prostrated by the blow and "lay in a stupor, unable to realize save in a hopeless way the appalling fact that death had entered her home at the invitation of her husband." The only seemingly plausible explanation for his actions was his recent battle with the grip, or the flu. Dr. Phillips had reportedly never been sick before in his life, and "he had told several of his fellow professors that he feared that he was not going to recover."<sup>22</sup>

The forestry department was devastated. They had just shockingly lost the beloved instructor, mentor, and leader who was most responsible for building up the program to national prominence. "Professor Phillips was one of the most popular of the younger members of the faculty," the newspaper reported. "His pupils at first refused to believe the story of the tragedy. Later, when the news was confirmed, many of them wept over their loss. For an hour his office at the university was filled with the thirty students in the department. Scarcely one of them failed to show his emotion by tears." Heartfelt memorials flooded in from around the nation – Harvard, Michigan, Yale, Ohio State, Colorado, etc. F. B. Moody, Nebraska Forestry Professor, wrote in the 1911 Cornhusker yearbook, "By hard knocks he had learned the practical side of forestry and his knowledge, coupled with keen powers of observation and a brilliant mind, served to make him a splendid leader and teacher, whose enthusiasm, cheerfulness and great appreciation of the efforts of others, will leave a lasting impression upon all who knew him."<sup>23</sup>

Fellow Professor O. L. Sponsler was soon tapped to try to fill Phillips' shoes. "The Regents met a while ago and foolishly put me in charge of the department," he wrote, "So you can expect to see it go down from now on."<sup>24</sup> His self-effacing charm disguised a competent leader. Sponsler guided the Department through those personally and professionally trying months. Most of the boys passed their civil service exams with fairly good marks, and Sponsler worked hard to secure summer employment for the students and to take on additional teaching duties.

But alas, one of the issues that had plagued the University in recent years forced another





*Forestry Club, 1912*

change. In July 1912, Sponsler took a similar position for significantly higher pay at Michigan. Nebraska had lost another good professor due to finances. This was a common occurrence throughout the departments and colleges of Nebraska University. Quality was beginning to suffer, according to an editorial in the State Journal in 1909, “because the state does not give it the same financial support as other institutions in surrounding states enjoy.” Chancellor Avery himself would lament that the “University was losing its choicest men because of the salary problem; and I was tired of having it serve as ‘a training ground for other universities.’”<sup>25</sup>

Consequently, Bessey and the Forestry Department were quite pleased when W. J. Morrill accepted the position in the summer of 1912. Morrill came highly recommended by the head forester of the USFS. He was another Yale man and had a “large amount of practical field training as well as a well-balanced theoretical training.”<sup>26</sup> Morrill appeared to keep the program humming along. By 1913, the department had grown to 49 students, including five working on graduate degrees. Of the alumni, 32 worked in government service, three in state work, and five in private pursuits (timber and landscape gardening).<sup>27</sup> The faculty were also still seen as innovative leaders. “I congratulate you on the progressive move I am led to believe you are making in beginning to prepare your graduates for City Forestry positions,” the Colorado Office of the Forester wrote to Morrill. “I am convinced that this line of the work is just in its infancy and I cannot tell you how thankful I am that I got into this part of the work instead of getting with Uncle Sam.”<sup>28</sup>

Underneath these merits, however, unrest was growing. Professor Phillips had been both a brilliant instructor and leader, and a trusted and beloved friend to most of the students. The culture was a mix of hard work and hard playing. Dr. Morrill, however, was more authoritative.

One of his first acts was to ban forestry students from informally congregating in certain rooms in Nebraska Hall, as they created “unnecessary noise, disturbed classes, and took undesirable privileges.”<sup>29</sup> This was an affront to many of the upperclassmen, who had been used to mostly having free reign. Much more serious complaints followed, however. Students circulated a petition in the spring of 1913, demanding Morrill’s resignation based on professional reasons and threatening to boycott the department if action was not taken against him. They claimed Morrill did not take personal charge of the civil service seminars, the most important classes for those hoping to enter government service. They cited an incident where he created and published inaccurate maps in the Forest Club Annuals. In an editorial by L.C. Hurtt, one of the upperclassmen, Morrill’s teaching efforts were heavily criticized:

In every course which Mr. Morrill attempted to teach a great deal of dissatisfaction arose because many essentials were left out and because the instruction did not contain salient facts which had been developed in recent years. In forest management many important problems came up which were never solved in class. Mr. Morrill promised to have a mathematician solve these, but failed to do so. The other courses were conducted in the same slipshod method until the students became completely disheartened.<sup>30</sup>

The faculty decided to take no action on the matter. “The high recommendation given (Dr. Morrill) by Dr. Graves (chief of U.S. Forestry Service) is enough to deafen our ears to the complaints of the students whose quarrel is plainly based on their not being allowed to have their own way.”<sup>31</sup> As a result, many of the students followed through on their threat to boycott the program. Only one out of the fifteen upperclassmen returned to school in the fall of 1913. They scattered to various forest reserves and universities and made it known they would not return as long as Morrill was there.

As to who was more to blame for this departmental disaster—Dr. Morrill or the petitioning students—is hard to determine. The truth was probably somewhere in the middle. However, the effect upon the program was undeniable. Membership in the Forestry Club was almost cut in half, from 34 in 1912 to just 18 by 1915. Their most significant and popular contribution to the field of forestry, the Forest Club Annual, was also put in jeopardy. Dr. Morrill fired L.C. Hurtt from his position as editor of the Annual as retribution for Hurtt’s criticism of his teaching. The club responded by voting to discontinue the publication. Morrill then took direct control of the Annual and developed it with the remaining students.<sup>32</sup> The department was still functioning, but the spirit and growth it enjoyed under previous heads had vanished.



*Forestry Club annual staff, 1913*

## CLEAR-CUTTING

While the Forestry program was dealing with internal disharmony, external events were conspiring to threaten the department's very existence. The University had consistently been under pressure to administer all their programs with what many academics believed to be an insufficient budget. This pressure became acute during the state legislature's budget crisis in 1915. Chancellor Avery made the unusual decision to call attention to this matter and increase student awareness and activity in his message in the 1915 Cornhusker yearbook. "Writing now in the last of March when the fate of the University is at the hands of the Legislature, I am disposed to be entirely serious ... We should have an intelligent interest in everything that is going on and be able to exercise influence for the benefit of the state and of the University."<sup>33</sup>

The Forestry Department, despite its great achievements and national reputation, was in an especially vulnerable position. "There has been a feeling on the part of certain members of the board of this institution," wrote Dean Burnett to the Board of Regents President, "that professional courses in forestry were unnecessary in Nebraska, since we have practically no trees or timber in the state. The work in other forestry schools has also increased by addition to the instructional force until many of these schools surpassed our own institution in their ability to offer professional courses in forestry on account of the larger support they receive and the larger number of instructors available."<sup>34</sup> Since the establishment of the department in 1903, 23 other forestry schools had been established throughout the nation. In addition, the demand for foresters from the Federal Government and commercial interests had decreased in the past decade.<sup>35</sup> Moreover, people outside of academia did not support funding a program in which practically none of its

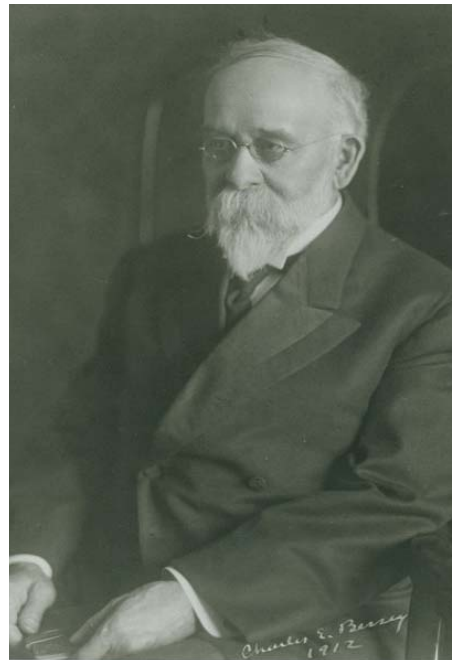
alumni were doing active work in the state.<sup>36</sup> Many believed the College of Agriculture, of which the Department of Forestry was a part since 1909, should focus its limited resources on activities and courses directly related to farming.

As this debate was being waged, the department received another hit when its biggest supporter and spiritual father was silenced. In February 1915, Charles Bessey died surrounded by family and friends. Professor Raymond Pool described in the last Forest Annual what he meant to the field:

Dr. Bessey was always to be found “boosting” for the forestry movement in all of its numerous phases and ramifications ... Throughout his eventful life he appropriated much of his boundless energy for the forestry movement which began to take definite form during his earlier scientific days. He enjoyed the most pleasant and profitable acquaintance and cooperation with such men as Morton, Rothrock, Roth, Fernow, Cleveland, Pinchot and Roosevelt. Truly these are names to conjure within American forestry! ... At this time we can only bow our heads and acknowledge by our own silence the magnitude of his goodly influence upon each and all of us. We were his boys!<sup>37</sup>

Among several other memorials, the Loup River forest reserve was renamed the Bessey Division and Nursery. The Nebraska National Forest, and indeed the University Forestry Department, would most likely have never existed without his energy and leadership. Now, without his voice, it appeared the program would not survive its most existential threat.

In the summer of 1915, after receiving their budget, the Regents “decided to discontinue courses in Forestry and to discontinue the Department ... The Regents feel that they could not consistently carry a Department of Forestry while the more important departments, those that have a direct relation to the industries of the state, were not properly supported.”<sup>38</sup> The confluence of several factors—budget crisis, agricultural priorities, internal strife, Bessey’s death—led to the demise of one of Nebraska University’s most successful programs. All the Forestry faculty were let



Charles Bessey, 1912

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go. Starting in the fall of 1915, Farm Forestry would be the only course offering in the discipline as part of the Horticulture program.

The legacy of the 1903-1915 Department of Forestry would live on for decades in the distinguished careers of its alumni. The following is a sampling of the influence and achievements of these graduates:

Dr. Clarence Korstian – Dean of the School of Forestry, Duke University  
Dr. Arthur Sampson – Professor of Forestry, University of California, Berkeley  
Dr. Gilmore B. MacDonald – Head of Department of Forestry, Iowa State College  
Dr. John Boyce – Professor of Forest Pathology, Yale University  
Professor Enoch Nelson – Department of Range Management, Colorado State College  
E. O. Siecke – Texas State Forester (1918-1942)  
Maurice Benedict – Supervisor of the Sequoia National Forest, California  
Raymond Garver – Director of the U.S. Forest Service “Forest Census”  
O. T. Swan and S. V. Fullaway – Leaders of nationally prominent lumberman’s organizations  
Jay Higgins – Forest Supervisor of the Nebraska National Forest  
Roy Pierce – Deputy Supervisor of the Nebraska National Forest  
Theodore Krueger – Planting and Technical Assistant in the Nebraska National Forest  
G. A. Pearson – USFS Ponderosa Pine expert  
Carlos Bates – USFS Silviculturist<sup>39</sup>

In the twelve years of the Nebraska University Department of Forestry, the faculty and students pursued many innovative initiatives. They pioneered tree planting methods and shelterbelt development. They corresponded with citizens about the best ways to nurture their forestry goals. They experimented with and studied diverse topics such as wildfire prevention, forest and tree health, and “city” forestry. Their published findings would drive the discipline forward and lend practical knowledge to their fellow Nebraskans. The sudden gutting of the program marked the end of the golden age of forestry instruction within Nebraska. However, the story of the Nebraska Forest Service, which would carry on many of these services in one form or another, had only just begun.

CHAPTER TWO

## SPEAKING FOR THE TREES

*(1915 - 1924)*

I speak for the trees, for the trees have no tongues. And I am asking you, sir, at the top of my lungs ...  
unless someone like you cares a whole awful lot, nothing is going to get better. It's not.

- Dr. Seuss, *The Lorax*

The Nebraska Forestry Department was silenced. Research on windbreaks, studies of tree insects and diseases, advances in fire prevention, a tradition of tree planting – it all seemed to have vanished in the hot summer wind of 1915. The problem was that the prairie wind itself did not disappear. A Nebraska summer wind will make a person walk crooked. Precious top soil will cake the face, blow into the eyes, off the farm, perhaps all the way to the Missouri River. The winter wind will freeze the skin, penetrate right to the bone, and blow the snow into useless drifts, right where it does no good for crops. What a cruel jokester Mother Nature can be.

Nebraska homesteaders and farmers had seen and heard what an effective windbreak could do. They had been to the national forests to see demonstrations, or had read about research in the Forest Club Annuals. Many had corresponded with Professors Miller, Phillips, Sponslor, and Morrill, asking for advice on choosing and caring for trees. Who were they to talk to now? Who in Nebraska would “speak for the trees”? After 50 years of advancements in forestry, it seemed that the state had forgotten about them.

Under the surface, however, the University continued to support its tree planting tradition. The state budget had gutted the official forestry department, but the school recognized that many rural and urban residents desired the assistance which the program had offered. In response,



*Nebraska Hall, circa 1910s*

the Department of Horticulture used funds from the Weeks Act of 1911 to create an extension position in 1915 that would assist with these needs.<sup>1</sup> The Extension horticulturalist position was charged with sharing his knowledge and experience and with “imparting information on forest trees.”<sup>2</sup> This was a far cry from the previous decade of forestry activity, but at least residents had one contact person at the university to answer their questions. In addition, the “farm forestry” course reappeared in the College of Agriculture bulletin of 1920-1921 under the Department of Horticulture.<sup>3</sup> These courses taught the principles of windbreaks and woodlot creation which the former Forestry Department had pioneered. Despite the demise of the Department of Forestry, the importance of its accomplishments to the productivity and preservation of the Nebraska landscape demanded attention.

The state government also focused upon Nebraska forestry in these years. On April 5, 1913, the Nebraska Legislature created the Nebraska Forestation Commission “to investigate the feasibility of forestation of school lands in the sand hill region of the state.” The Commission found that these “mile-square areas of land were too many and too isolated to be managed as forests.”<sup>4</sup> The net results of this commission amounted to little more than the publication of two biennial reports. Any meaningful progress in forestry would continue to be accomplished under the University umbrella, rather than a different state agency.

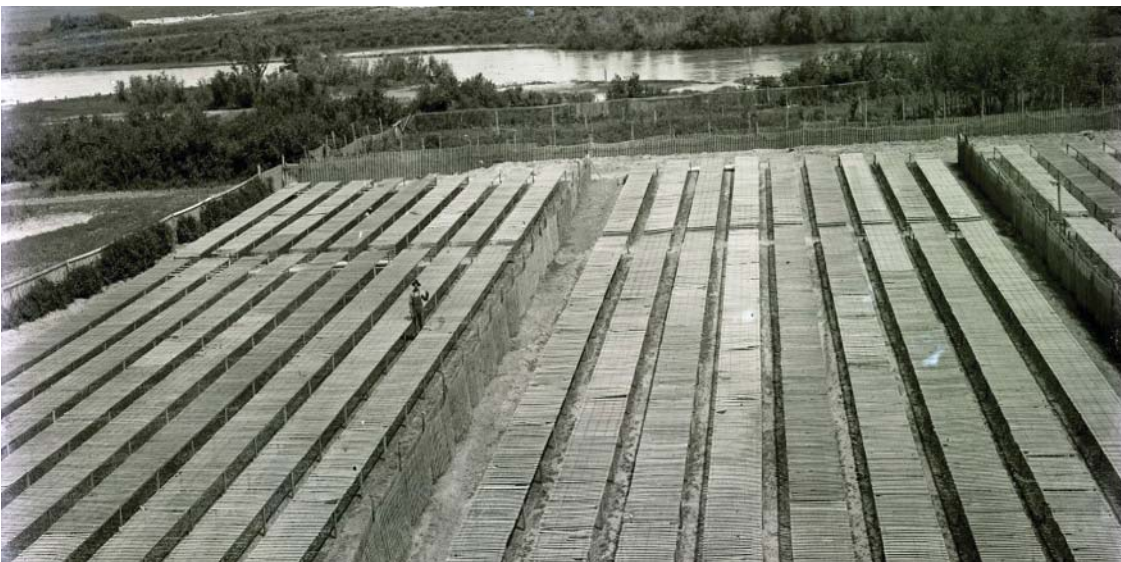
As the extension Horticulturist was attempting to keep up with education and outreach, the University created another division charged with forestry duties. In 1921 the Conservation and Survey Division began to “survey and describe the natural resources of the state, including soil, water, waterpower, potash, forests, road materials and cement.” In addition, the new division was



given the authority to “appoint a member of the division State Forester to assist in developing the forest resources and parks of the state.”<sup>5</sup> Finally, Nebraska had an official State Forester. Too bad the state legislature did not include an appropriate budget to perform the duties. Raymond J. Pool, Professor of Botany, became the first nominal State Forester in 1921. Professor Pool was selected for the position because he had contributed to the Nebraska Conservation and Soil Survey for the past couple years. He would continue to periodically submit a Handbook of Nebraska Trees into the 1950s. “The chief purpose of this little book,” he wrote in 1919, “is to offer a ready and direct means for the identification of our native and commoner introduced trees and to supply information about the same of the kind which is being continually requested of the department of botany.”<sup>6</sup> The new State Forester would also call for a “revival of tree planting in this state”.<sup>7</sup> Yet with no funding or actionable mandate from the state legislature, Pool’s contributions to forestry did not extend beyond publishing reports. The little real work during these years continued to be performed by the Extension horticulturist.

Activity in the Nebraska National Forest also continued unabated. Beginning with the 1904 Kincaid Act, the U.S. Forest Service had been distributing free trees to Nebraskans living west of the 100th meridian (west of Cozad). Between 1912 and 1924, about 1,877,445 trees were delivered by the Bessey Nursery.<sup>8</sup>

The university also stayed active in the Nebraska National Forests through its work at the Agricultural Experiment Station. The Department of Entomology facilitated forestry health and research projects and would periodically publish their findings in the College of Agriculture research bulletins. In 1910, for example, the Acting US Forest Supervisor asked the Department of Entomology to “take up the study of the pine tipmoth as a definite project.”<sup>9</sup> Recent attacks of the tipmoth had resulted in the “loss of from 7 to 10 inches of growth in the terminal and lateral jack



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Nebraska National Forest, circa 1910s



pine shoots.”<sup>10</sup> The Agricultural Experiment Station published its findings in 1927 and suggested methods of removing the infestation. The essential work of forestry health, despite the loss of the Department of Forestry, proved tenacious in its progress.

Field days at the North Platte Experimental Substation began in 1922. Visiting farmers and ranchers were driven around the Station and introduced to the latest improvements in agriculture and farm forestry. A short ride to the cherry, plum, and apple orchards promised the opportunity for home-grown fruit to its self-reliant audience. Next up, the Black Hills spruce windbreak offered an “easily grown” method to slow soil erosion and moisture evaporation. No one would miss stopping by the Dairy either - home of “Beauty Girl, whose butter production is about 8 times that of the average *milch* cow of the United States.” After a picnic lunch and free lemonade, the farmers listened to lectures concerning agriculture and one about “growing trees in a treeless country.”<sup>11</sup> Many Nebraska residents were still hungry for the utility and beauty of trees, and the University fed it to them. That and a whole lot of butter.

Forestry in Nebraska had survived its “dark ages” of 1916 to 1924. The Extension horticulturist, Conservation and Survey Division, and Agricultural Experiment Station had preserved a modicum of forestry outreach and research. Yet it seemed it would take an act of Congress to revive significant activity within the state. And that is exactly what happened.

## PENNY TREES

Forest conservation entered the national consciousness through the leadership of men such as Theodore Roosevelt and Gifford Pinchot and the romantic writings of John Muir. Several national parks preserved the unique beauty of parts of the western United States. Yet the vast majority of U.S. forestland remained in private hands. After World War I, the nation’s attention turned again to domestic issues, such as the public regulation of privately-owned forestlands. Loggers were cutting at an unsustainable rate. Concerns grew that the country would lose forever what could and should be a renewable resource. In this political environment, a major controversy developed over how the federal and state governments should protect these lands, if at all. Should they employ tax credits and penalties to encourage good forestry practices? Should programs be established to assist in the conservation of private lands? And perhaps the most divisive issue concerned a debate which has ran throughout the entire history of the Government—to what extent and in what manner should the federal or state governments have legislative, jurisdictional, and administrative authority?

Several leading forestry figures called for cooperation between the federal and state governments to develop programs which would encourage reforestation of private lands. “The problem of halting forest devastation is fundamentally a national, not a local, problem and must be faced and

handled as such,” wrote the Chief U.S. Forester, William Greeley, in 1920. “At the same time it is felt that the speediest, surest, and most equitable action can be secured through dependence on the police powers of the states for the enforcement of such reasonable requirements as should be made of private owners...”<sup>12</sup> After holding 24 hearings in 16 states, Representative John Clarke of New York and Senator Charles McNary of Oregon cobbled together a bill which extended public forest ownership, encouraged sustainable practices on private lands, and called for cooperative responsibilities between the federal and state governments. The Clarke-McNary Act was signed into law on June 7, 1924.

States had the option of participating in any or all of the sections of this new program, which included activities such as fire prevention, tree distribution, forest education and extension, the establishment of national forests, and the government purchase of forestlands. Clearly not all of the sections of Clarke-McNary applied to a prairie state such as Nebraska, but interest peaked over the tree distribution provision. Nebraska, the “Tree Planter’s State” and home of Arbor Day, had seen its windbreaks and tree population decline since closing the University’s forestry program, and many saw the Clarke-McNary bill as an opportunity to reestablish and improve upon the benefits of these proven farm forestry techniques.

In early 1926 Governor Adam McMullen called a conference attended by the Dean of the College of Agriculture, Director of Agricultural Extension, Secretary of the State Department of Agriculture, Chairman of the Department of Horticulture, Chairman of the Conservation and Survey Division, and representatives of several commercial nurseries. They reached a consensus to comply with Section 4, which called for the “procurement, production, and distribution of forest-tree seeds and plants, for the purpose of establishing windbreaks, shelterbelts, and farm wood lots.”<sup>13</sup> Evergreen transplants (redcedar, ponderosa pine, Austrian pine, jack pine, and Scotch pine) would be supplied by the Bessey Nursery, while broadleaves (American elm, ash, black locust, boxelder, caragana, Chinese elm, cottonwood, hackberry, honeylocust, Russian mulberry, Russian olive, soft maple, and wild plum) would come from private Nebraska nurseries. Work started immediately in the spring of 1926, and by the end of the year 33,900 trees were distributed to 96 cooperators in 44 counties.<sup>14</sup> This first distribution was directed by C.C. Wiggans, Chairman of the Horticulture Department; however, this task was far too large to continue in this manner.

Clayton W. Watkins was hired as the first State Extension Forester in the fall of 1926 to handle the tree distribution program and to also fulfill the extension duties outlined in section 5 of the Clarke-McNary Act. These duties included “assisting the owners of farms in establishing, improving, and renewing woodlots, shelter belts, windbreaks, and other valuable forest growth.”<sup>15</sup> With a mix of federal and state funds, Nebraskans now had a dedicated forester to assist them to a degree they had not experienced since 1915. In addition, the cost of delivered trees remained \$1.00 per hundred from 1926 to 1945.



*Clayton Watkins, first Nebraska  
State Extension Forester*

Popularly known as “penny trees”, farmers and ranchers benefitted greatly from the program, using them for farmstead windbreaks, field shelterbelts, livestock shelters, wildlife habitats, fence posts, and other wood products.<sup>16</sup> In the years leading up to the Dust Bowl, total annual tree distribution would steadily increase from 186,000 in 1927 to 960,500 in 1931, with 3,212 cooperators.<sup>17</sup> Nebraska once again deserved its “Tree Planter’s State” moniker, and a new era of forestry had begun.

### **UNIVERSITY VERSUS STATE GOVERNMENT ACTIVITY**

The University now employed an Extension Forester within the Department of Agriculture Extension Service.

Charged with carrying out sections four and five of Clarke-McNary, Watkins worked closely with county extension agents to promote the benefits of tree planting. The farm forestry techniques researched and taught on campus became part of each county extension program, and emphasis was “given to forest tree planting and tree culture through community meetings, tours, demonstrations, circulars, as a part of women’s projects, etc.”<sup>18</sup> The Conservation and Survey Division continued to publish bulletins and statistics on tree planting and forestland, and the Agricultural Experiment Station’s field days maintained their entertaining forestry outreach activities.

In contrast, the manner of state government activity outside of the University remained consistent—as Macbeth may have described it, grand committee names, full of sound and fury, signifying nothing. Governor McMullen formed the State Forestation Committee in 1926 and included several distinguished members: G. E. Condra, Director of the Conservation and Survey Division; H.J. McLaughlin, Secretary of the State Department of Agriculture; Jay Higgins, Director of the Nebraska National Forest Reserves; W. W. Burr, Director of the Nebraska Agricultural Experiment Stations; George Marshall, State Nurserymen’s Association; and W. H. Brokaw, Director of Agricultural Extension (Clayton Watkin’s superior). In 1929 the governor expanded the group and renamed it the State Committee on Tree Planting and Landscape Beautification, forming sub-committees to “enlist the interest and cooperation of every phase of education, industrial, and religious endeavor.”<sup>19</sup> Despite venerable members and ambitious goals, a lack of funding (committee members themselves received no pay) and no executive authority led to little more than discussions, meetings, and the listing of their names on the backs of the University’s Conservation Series bulletins.<sup>20</sup>

Those familiar with the Nebraska Game and Parks Commission may also remember when it was known as the Game, Forestation, and Parks Commission. For the first time, Nebraska had a state agency which was formally charged with performing forestry duties. "It shall be the duty of the Commission," read the new 1929 statute, "to study forestation conditions and methods of development thereof throughout the state; collect information and data pertaining thereto; cooperate with and assist all citizens, organizations, and communities with the state in forestation work, disseminate forestation information through reports, recommendations and such publicity methods as the commission may deem expedient."<sup>21</sup> However, the state government depended once again upon the University to perform these duties. In a 1935 letter, Myron Jenkins, Director of Forestry Survey and Research at the University, described to a U.S. Forester in Washington D.C. the extent to which this new state agency participated:

This commission has made bi-annual reports since it was formed, beginning with the year '29 but the subject of forestry has been given very little attention in these reports. This commission publishes "Outdoor Nebraska" which has some short articles relating to forestry and kindred subjects. Under the commission's auspices ... there is a fine little paper prepared by Earl G. Maxwell, State Forester, under the title of "More Trees and Shrubs for Nebraska."<sup>22</sup>

The Game, Forestation, and Parks Commission, which held that name from 1929 to 1967, resembled the prior Nebraska Forestation Commission and the State Forestation Committee in its dearth of effective output on forestry related matters. Instead, the University's Extension Forester and cooperating county extension agents were relied upon for tree distribution, farm forestry outreach, and windbreak assistance. Little did they know that the biggest test of their skills and expertise would soon howl across Nebraska and the Great Plains, leaving famine, death, and destruction in its wake.



“During the storm of last January tons of the richest soil was carried off plowed fields by the wind. That this would not have occurred had proper windbreaks been provided was proved by observations made in fields where protection was afforded and in no instance was the effect harmful to any great degree.”<sup>1</sup>

-C.C. Marshall, Washington County, March 24, 1909

CHAPTER THREE

## WEATHERING THE STORM

(1924 - 1952)

“15 years ago the whole Republican River bottom was a vast expanse of alfalfa and corn fields. Now it is practically a desert of wasted, shifting sand, washed out ditches, cockle burrs and devastation ... Over 2500 have died (in the last two weeks) in this ‘great middle west’ of the effects of this Hellish weather and country ... Those who coined the phrase ‘There’s no place like Nebraska’ wrote better than they thought. In Nebraska, you don’t have to die to go to hell.”<sup>2</sup>

-Don Hartwell diary, Webster County, 1936-37

Don Hartwell and his family lived, if you could call it living, outside of Inavale, Nebraska, in an area which would popularly become known as the Dust Bowl. Life on the prairie was never easy, but the Hartwells and families like them across Nebraska had enjoyed bountiful times. In the few decades before the Dirty Thirties, farmers counted on adequate rainfall and booming crop markets to fill their bellies, stock their homes, and raise generations of children. If you wore out a pair of boots here, it was commonly said, you would live here the rest of your life. So what happened to turn this Garden of Eden into a Hell on Earth? How did the Good Life suddenly blow away?

The left-facing quote from 1909 alludes to the principle reason for the ecological disaster which would decimate the Great Plains twenty years later: “... the richest soil was carried off plowed fields by the wind”. The first few decades of the twentieth century are known as the time of the “Great Plowup”. Settlers were encouraged to remove the native prairie grasses and sod which would only sap moisture from cash crops. “The soil is the one indestructible, immutable asset that the nation possesses,” assured the Federal Bureau of Soils in 1909. “It is the one resource that cannot be exhausted, that cannot be used up.”<sup>3</sup> Plow up the soil, drop in wheat and

corn seeds, let the sun and rain do their thing, and by fall you will have a bountiful harvest. This strategy proved increasingly enticing following the outbreak of World War I. Germany blockaded Russian wheat exports, and prices doubled to \$2.00 per bushel in the United States. Settlers and “suitcase” farmers took advantage of the situation by ripping up the native grasslands at an unprecedented rate, exposing rich topsoil to the elements. Throughout most of the 1920s, Mother Nature supplied enough moisture to raise bumper crops and keep the “immutable” soil from mutating.

In October 1929, Nebraskans heard about some kind of a stock market crash in New York City. Some city dwellers had even flung themselves out of their skyscraper windows. Thank goodness we are here in the agricultural heartland, they must have thought. Those problems were a world away. Indeed, the rain and soil cooperated for another two growing seasons. But 1930 and 1931 were bitter harvests. Worldwide agricultural prices had plummeted, leaving farmers scrambling to pay their mortgages and farm machinery loans. They also walked along their barren, dry fields. The rain had tapered off last spring, and the dust storms were increasing.

The drouth (it was “drouth”, never drought in the Plains those days) was always expected to be better “next year”. People who lived off the land had to steel themselves with that hope. But the rain did not come. Instead, Mother Nature sent a ferocious wind year after year, snatching the “indestructible” soil up into “black blizzards” over 10,000 feet high, clogging the noses of livestock and filling the lungs of dying children. The Dust Bowl had arrived, the largest man-made ecological disaster in recorded history. When the Midwest lobbied the New Deal President for relief, many city dwellers on the East Coast did not believe the situation was dire enough to divert significant resources. Then in May 1934, dirt which used to belong to Nebraska and the other Dust Bowl states blotted out the sun over Washington D.C. and the East Coast. The insidious dust even crept into the Oval Office, where President Roosevelt, ran his fingers across his desk and used the dust to illustrate the dire need for soil conservation and another project he proposed two years earlier.

## **PRAIRIE STATES FORESTRY PROJECT**

Roosevelt campaigned across the Great Plains in 1932, encountering the devastating effects of drought and wind erosion. Always a man of creativity and experimentation, Roosevelt proposed planting 100 mile wide windbreaks stretching from Canada to Texas. The bold plan was put in action by Executive Order on July 11, 1934. As with most other tree-planting efforts of the past century, Nebraska played a central role. With kitchen chairs and orange crates for furniture, the first personnel arrived on August 8 to set up their national office in the new Sharp Building in downtown Lincoln, Nebraska.<sup>4</sup> By the end of the first year, Paul Henley Roberts was named the

project's National Director. Roberts was a native of Maxwell, Nebraska, and received his B.S. in Forestry from Nebraska University in 1915, and served as President of the Forestry Club (the final graduating class before the Department was disbanded.) Due in part to his experience and education in Nebraska with tree planting and windbreak development, Roberts was placed in charge of the Prairie States Forestry Project (PSFP) until its conclusion in 1942.<sup>5</sup> At the first State Director's meeting in Lincoln in February 1935, Roberts pressed upon his organization the importance of its undertaking:

We are attacking the problem of growing trees on a scale of great magnitude, not in a region where successful tree planting can be taken for granted, but by deliberate choice in a zone at about the climatic limits of tree growth. It would be difficult to conceive of a more intriguing enterprise or of one which offers a greater challenge to the ingenuity and skill of an organization. We are, furthermore, not alone concerned with tree planting. The Project has far broader phases. It is, in its present proportions, a new departure in forestry.<sup>6</sup>

A new departure indeed, but to many it was a "Paul Bunyan's venture in forestry's no man's land." U.S. Chief Forester F. A. Silcox reminded his audience of the initial response of many in a national radio broadcast in 1938: "They said that trees had never grown on the prairies to any great extent and accepted that fact as proof that large-scale tree planting was bound to fail. The prophets included a number of well-known foresters."<sup>7</sup> One such prophet was Royal S. Kellogg. "Nature clothed the Plains with buffalo grass and other hardy species just as she covered the northeastern States with pine and spruce and hardwoods," he wrote in an article entitled "The Shelterbelt Scheme". "We might conceivably cover the High Plains with trees and we might carpet the State of Maine with buffalo grass, but if we are sensible we shall try to do neither."<sup>8</sup>

"Why the present wave of skepticism?" Director Roberts retorted. "Is the forestry profession changing front on the question of tree planting? If shelterbelt planting by the Federal Government is judged impracticable must we not, in order to be logical, admit the Clarke-McNary distribution in the Prairie Plains Region and other efforts of the past to promote shelterbelt plantings are ready to be discarded?"<sup>9</sup> Roberts had first-hand knowledge of the progress which had occurred over the decades within the state: the Nebraska Forestry Department's windbreak and farm forestry research, the success of tree planting in the Nebraska National Forest and the Bessey Nursery, and the growing popularity of the Extension Services' Clarke-McNary tree distributions. The new shelterbelt program, Roberts argued, would simply apply these proven tree planting methods on a grander scale.

Yet the project still suffered from bad press in the initial months. Many envisioned a contin-





*Tree planting project, PSFP era*

uous 100-mile wide shelterbelt crossing from North Dakota through Texas. Towns would have to be moved, farmsteads would be sliced apart. “The plan is fantastically impossible,” reported the *Journal of Forestry*. “The whole enterprise, prominent as it is in the public mind, bids fair to prove a boomerang which will give forestry a terrific setback in public opinion.” In actuality, the Shelterbelts were never intended to be continuous, and they would only be placed along public lands and cooperating farmsteads. “It is not an undertaking in which slipshod methods will succeed,” wrote the senior silviculturist for the U.S. Forest Service in 1934. “It represents a challenge to the technical skill of the profession and will require that our coming foresters develop a technical skill and a love for the soil which has not been much in evidence in the past.”<sup>10</sup> These technical skills, many of them pioneered in Nebraska, were evident to Chief Forester Silcox as he visited a farmstead. “We stopped at one of the old windbreaks,” he recalled in 1938, “where trees 80 to 90 feet tall were sheltering a cornfield. We walked out into that cornfield for a thousand feet before the wind became strong enough to bend the tassels. The sheltered corn was estimated to yield as much as 65 to 70 bushels an acre. Yet in part of the same field where there was no tree protection, the corn had been burned brown and dry by a hot wind.”<sup>11</sup>

Most people in the Tree Planter’s State had known for decades about the benefits described by Silcox, and they readily agreed with the merits of the project. “Better to plant the forest belts,” concluded an Omaha World-Herald editorial, “and thus bring nature to our aid in restoring the fertility of the Midwest and in making it livable than tamely to abandon it and permit it to become a desert. The tree plan not only is fascinating, it seems also to be extremely practical.”<sup>12</sup> Federal funds for the project would come from the Emergency Relief Act and later from the Norris-Doxey Cooperative Farm Forestry Act of 1937 (co-sponsored by Nebraska Senator George

Norris). On April 13, 1935, the Nebraska legislature would authorize the Board of Educational Lands and Funds to enter into “co-operative agreement with the United States of America for the improvement of state educational and other lands by the establishment and maintenance of shelterbelts of trees and other plants thereon; and to declare an emergency.”<sup>13</sup> In addition to public lands, private farmers quickly partnered with the federal government. The first shelterbelt tree planted in Nebraska was near McCook on April 4, 1935, and the first complete windbreak was established that same month on the John Schleusener farm near Orchard.<sup>14</sup>

State Directors were put in direct charge of the work in their respective states, which included North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. As the man chiefly responsible for the early success of the Clarke-McNary tree distribution program, State Extension Forester Clayton Watkins was the obvious choice to become the Director of the Nebraska Shelterbelt office. Watkins’ new federal duties were numerous: make contracts with the re-employment administration for men for planting, make contracts with farmers for field shelterbelts, effect an organization consisting of five districts and operate as a defined hierarchy, purchase trees, make arrangements with nurseries for lease of land for raising seedlings, and make arrangements for transportation, warehousing, and miscellaneous necessities.<sup>15</sup>

## STATE FORESTRY ACTIVITY GROWS

The Shelterbelt Project understandably attracted much public attention. It was a project of fantastic proportion, a veritable “new departure in forestry”. It also overshadowed the fruitful work which continued in the 1930s under the University umbrella. Myron Jenkins served as Director of Forestry Survey and Research from 1936 to 1943. In addition to assembling and publishing forestry data, Jenkins performed a great deal of educational work and stimulated public interest in forestry.<sup>16</sup> His files are littered with correspondence with Nebraskans across the state in a manner reminiscent of Professors Miller and Phillips. “It may be of interest to you,” he wrote to a farmer in Wilber, “that William Caha, living near Wahoo, Nebraska, has ten acres in hardy nut trees ... the two he likes best, however, are the Thomas and Ohio varieties.”<sup>17</sup> Jenkins encouraged urban and rural citizens to plant trees and educated them on the benefits of community forestry and windbreaks.

The State Extension Forester and the county extension agents, however, continued to perform most of the tangible forestry activity within the state. Now that the Federal Government had hired Clayton Watkins for the PSFP in 1935, the University had an urgent need to fill the vacancy. Fortunately, due to the demands of the growing Clarke-McNary program, the University had already hired Earl Maxwell to fill the new position of Junior Extension Forester in 1934. Maxwell was a graduate of Purdue University and received an M.A. degree from Nebraska University in 1915. He would serve in various capacities with the Agricultural Extension Service beginning in 1917,

including being the Douglas County Extension Agent from 1918 to 1930. As Watkins assumed his role as State Director of the PSFP, Maxwell became the sole Extension Forester and the “top tree expert” at the University.

Maxwell walked into his new role during a time of unprecedented challenges. Cankerworms became a scourge in Nebraska during the Dirty Thirties. “I don’t remember such a siege,” said Maxwell, “as we have had in the last two years since I became extension forester in 1935.” The university’s plant pathologists had also detected phloem necrosis in Lincoln’s elm trees.<sup>18</sup> Forest health issues such as these conflated with the severe drought conditions to create a crisis throughout Nebraska. The PSFP offered hope across the Great Plains, but the Nebraska farmsteads most likely to benefit were mostly in the central and northeastern parts. The rest of the state looked for help from the Extension Service and its tree distribution program.

Maxwell proved to be the right man for a difficult time. He approached his duties with enthusiasm and energy, spending over half of every year in the field and visiting about twenty counties per month. “Max”, as he was commonly known, tirelessly boosted for the benefits of tree planting. In 1936 he described some of the challenges encountered and achievements possible:



*Earl Maxwell (right) handling tree seedlings*

We hear it said that trees will not grow in many parts of Nebraska. This is not based in fact. Successful planting can be found in every county in the state. Many of these plantings have withstood the drouth (sic) of the last few years and have produced seed which is used to grow planting stock that will be equally hardy. Some of the failures of the past have been due to a lack of knowledge of proper species, spacing trees too close together, and use of seed from a source which did not provide hardy stock or from failure to conserve soil moisture.<sup>19</sup>

Maxwell organized community demonstrations to illustrate the above principles of tree planting. John Buethe, a farmer in Johnson County, planted an L-shaped windbreak in 1932, and it served as an outstanding example of what was possible even during low moisture years. The J.J. Lydick farm in Burt County displayed row upon



*4-H Forestry Club members gather around Maxwell*

row of pines which offered protection and beauty. Maxwell also promoted the “penny trees” in countless newspapers, farm magazines, and through organizations such as the Nebraska Nurserymen’s Association. Under his leadership, Clarke-McNary tree distribution would increase from 1,114,500 in 1934 to 1,660,300 in 1937, with a corresponding 44 percent increase in the number of cooperators.<sup>20</sup>

Rather than being overwhelmed by the administration and promotion of Clarke-McNary, Maxwell took it upon himself to simultaneously develop a new program which would instill the tree-planting spirit in young people. 4-H Clubs statewide were invited to form forestry clubs for the first time. The first eighteen clubs were supplied with project material, directions on tree planting, and 100 free evergreen transplants. In 1936, the first year of the program, an estimated 40,000 trees were planted, 22,000 of them supplied free of charge by the Extension Service. In addition, each 4-H Forestry Club was required to hold at least one tree planting demonstration for the public. These demonstrations, almost always attended by Maxwell, offered yet more opportunities to share successful farm forestry techniques during unfavorable conditions. Participation in the program continued to grow through 1939, with an estimated 83,000 trees planted, 67,700 gratis. Jenkins’ Conservation and Survey Division contributed by supplying each 4-H Forestry Club with Dr. Pool’s Bulletin No. 7, “Book of Nebraska Trees”. “The work you are doing for the young people of Nebraska,” wrote Jenkins to Maxwell in 1937, “by means of forming 4-H Forestry Clubs is to be highly commended. I know of no type of work in the field of conservation which will bring

more enduring values to our state than this work among our fine young people. I am sure that your initiative and vision will be richly rewarded during the coming years.”<sup>21</sup> Indeed, the Extension Service was a hub of positive activity under Earl Maxwell.

## TURMOIL IN THE SHARP BUILDING

The mood was much more contentious across town in the national office of the PSFP. Before the passage of the Cooperative Farm Forestry Act (Norris-Doxey Act) of 1937, the Shelterbelt Project was funded temporarily through the Emergency Relief Act. Clayton Watkins was part of the 1935-36 skeleton organization retained to do the initial work, which chiefly included the development of a nursery stock for the following spring and the disposal of it to the best interests of the people and the Federal Government. Due to the uncertain funding situation, on June 30, 1936, about 50 percent of the permanent organization was transferred to other agencies or their services terminated.<sup>22</sup> Watkins was among those terminated, and he returned to the University as Extension Forester (alongside Maxwell) until his retirement in 1940.

The Norris-Doxey Act of 1937 would formally authorize the project, now known as the PSFP. Official appropriation, however, led to opposition from private forestry concerns. The American Association of Nurserymen rallied its members against the bill in a correspondence originating from Arlington, Nebraska in May 1937:

As introduced, the bill provided that ‘the Government shall not contribute to the direct additional cost of more than 50 percent of the established ultimate direct additional cost of establishing, protecting, and caring for any such tree or shrub plantation’, etc. This would have required the land owner to bear one-half of the expense of establishing and maintaining such plantings, but, an amendment deleted this part allowing the Government to bear all of the expense, making the competition with nurseries much greater.<sup>23</sup>

This argument gained national traction within the nurserymen network, especially after numbers were thrown together to make their point. The letter from the nurserymen maintained that the Shelterbelt Project had cost the Federal Government about \$1,400 per farm in Nebraska. “Clarke-McNary plantings in the prairie states are quite as successful as Shelterbelt plantings,” it concluded, “and cost the government only a fraction as much. This Farm Forestry bill sets up another Bureau which will operate in all sections and will be a constant menace to the nursery business. Let’s stop it if we can.”<sup>24</sup>





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*Tree seedlings from Plumfield Nursery being loaded for distribution, circa 1940s*

They could not. Myron Jenkins, Director of Forestry Survey and Research, sent letters to members of Congress and state foresters throughout the Great Plains and impressed upon them the need for the appropriation. “Extensive surveys and careful studies give preponderant evidence that favorable crop producing conditions may be greatly enhanced through an extensive tree planting program throughout the region,” Jenkins argued. “It appears to me that the Farm Forestry Act offers the most feasible and complete program for this purpose that has ever been devised by Congress.”<sup>25</sup> Maxwell and Jenkins appreciated the effectiveness of the Clark-McNary Program and wished to see the fledgling PSFP also succeed. Due in part to their support, the State of Nebraska signed a memorandum of understanding (MOU) with the Federal Government later that year, along with many other states.

Clayton Watkins, however, would adopt much of the Nurserymen Association’s line of attack. His experience with the Shelterbelt Project, or perhaps his termination from it, made Watkins an outspoken critic of the venture. In the April 23, 1938 edition of *The Nebraska Farmer* he asked, “Remember the Shelterbelt? That great protective belt of trees that was to extend from Canada to the Gulf!” Watkins used the Annual Report of the Chief of the Forest Service to blast the project on many fronts. It used emergency funds instead of liquidating in 1937 as Congress instructed. The Forest Service exaggerated its tree survival rate. The Shelterbelt cost per acre was \$113.24, while privately owned commercial nurseries had offered to duplicate the plantings for \$30 an acre. “The Shelterbelt has announced that in 1938 it is going to plant 4,300 miles of tree strips – about 60 percent more than 1935, 1936, and 1937 put together!” exclaimed Watkins. “And in 1936

Congress appropriated \$170,000 for the Shelterbelt to 'liquidate.' It looks as if the laugh is on Congress."<sup>26</sup>

Just three days after publication, D. S. Olson, Chief of Timber Management for the Forest Service, responded to Watkins' Nebraska Farmer article. "There is no excuse for his distorted statements and vicious jabs at this program," Olson retorted. "The true meaning of the statements in the Annual Report are well known to Watkins. He was State Director for Nebraska on this project until June, 1936, and since then has been kept informed of policies and pertinent facts pertaining to the project up to the present time."<sup>27</sup> The project had, for all intents and purposes, been liquidated, and emergency funds were used to insure planting stock was intelligently distributed until further appropriations were received. The tree survival rate was accurate based on fiscal figures. Most importantly, the Forest Chief responded to claims from Watkins and the Nurserymen's Association that private nurseries were willing and able to supply Shelterbelt trees much more efficiently. The \$113.24 per Shelterbelt acre figure included "research, exploratory work, investments in equipment, improvements, training of personnel, and so on, that today represent a physical investment of hundreds of thousands of dollars, and a foundation of scientific investigation upon which a value would be difficult to place, but which will pay large dividends to the future of forestry in these Plains States." After these initial investments, Olson concluded, the 4,300 miles of shelterbelts planned for 1938 would cost much less than the \$30 per acre proposed by private concerns.<sup>28</sup>

Watkins had left the PSFP's Lincoln headquarters clearly disillusioned with the Project. His attitude, however, did not change the opinions of his University colleagues. Jenkins continued to lobby for federal appropriations, and Maxwell supported any and all efforts to effectively popu-



Work at the Plumfield Nursery, PSFP era



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*Work at the Bessey Nursery, PSFP era*

late the state with trees. Indeed, Watkins's final years as the Senior Extension Forester would see Nebraska develop a closer working relationship with the Federal Government. In December 1937, the University and the U.S. Forest Service developed a lengthy report entitled *A Forestry Plan for Nebraska*, in which they emphasized the importance to Nebraska of federal programs such as the Nebraska National Forest, the Clark-McNary Program, and the PSFP. They also proposed increased cooperation on several fronts: windbreak plantings, soil conservation, flood control, road protection, and demonstration plantings for livestock protection, recreation areas, and rural schools.<sup>29</sup>

The 1937 Forestry Plan also recommended the appointment of an official State Forester. The Nebraska Legislature had authorized the Department of Conservation and Survey to appoint a State Forester in 1921, yet the position lacked funding and remained a nominal post.

Nebraska was one of only three states (out of the 48 in 1937) without an effective State Forester, and the USFS suggested the state remedy the situation.<sup>30</sup> The Forestry Plan called for the new State Forester to, among other things, coordinate "the forestry activities of all state agencies" and to provide "state guidance in the coordination of state and federal forestry activities."<sup>31</sup> Growth in the number and extent of programs was complicating effective execution and communication. Forestry work continued, but the Nebraska Legislature would not clarify and develop the State Forester position for another three decades.





*Maxwell being interviewed by KFAB in Pine Ridge, 1940s*

## RESULTS OF THE PSFP IN NEBRASKA

“This shelterbelt program,” read the Lincoln Star in 1940, “which got national headlines when President Roosevelt first announced it in 1935, has been little heard of since.”<sup>32</sup> Indeed, Clarke-McNary seedlings, which were distributed throughout the state by Watkins, Maxwell, and county extension agents, seemed more at the top of the mind of the typical Nebraskan. Director Paul Roberts, therefore, arranged for a Nebraska Shelterbelt Field Day and Picnic. An estimated 14,000 people visited Northeast Nebraska on Sunday, June 16, 1940. The Neligh district was home to the greatest concentration of shelterbelt trees in the entire Great Plains region, some of them reaching 25 to 30 feet. Visitors were also shown other plantings indicative of the unique history of the “Tree Planter’s State”: “farm windbreaks grown from trees supplied through the College of Agriculture, 4-H club plantings, old timber claims of pioneer days, and old graves of huge cottonwood trees.”<sup>33</sup>

Later in the day, the audience was treated to a talk entitled “Trees – Their Place and Value in Nebraska”, delivered by Mari Sandoz, the author and daughter of the early Nebraska tree planter, “Old Jules” Sandoz.<sup>34</sup> A 1941 Field Day in Pierce also drew a crowd of over 10,000 and helped publicize the accomplishments of the project.

Overall, Nebraskans had positive opinions about the PSFP. The Shelterbelt Field Days were warmly supported by Republican leaders and conservative newspapers who were often bitterly opposed to the Roosevelt Administration.<sup>35</sup> Local financial institutions saw the project as financially productive. “It costs our bank around \$40 to \$50 per farm to fence in these trees,” noted the Joint Stock Land Bank of Lincoln, “and a good grove of trees adds from \$500 to \$1,000 to the



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*Maxwell and Plumfield Nursery worker, late 1940s*

value of a farm.”<sup>36</sup> When asked by the Office of Government Reports to survey public opinion, the State Director received a plethora of positive comments. “It is my opinion that in the future the residents of Nebraska will be very happy that someone was farsighted enough to construct these shelterbelts,” said a Fremont lawyer, “just as we are now grateful for the stimulus given us by J. Sterling Morton and his Arbor Day.”<sup>37</sup> From a secretary of the Chamber of Commerce: “The general public opinion regarding the program in this trading area is very acceptable. If there are critics to the program, I personally have heard none.”<sup>38</sup> Ultimately, the popularity of the program was proven by the extent of participation. Nebraskans planted over 45 million trees and shrubs occupying 51,621 acres on 6,944 farms. The 4,170 miles of windbreaks were the most planted of any state in the PSFP.<sup>39</sup>

The attacks of December 7th, 1941 not only shook the nation, but also led to a seismic shift in domestic policy. Federal funding for many programs not directly involved in the war effort, such as the PSFP, dried up. WPA and CCC workers were either drafted or assigned to other work. The Project was transferred from the USFS to the USDA Soil Conservation Service (SCS) on July 1, 1942. Some hoped that the SCS would include tree planting as a part of their rehabilitation of the Great Plains. However, the USFS expressed doubt in a 1942 report: “At this time the Soil Conservation Service is largely dominated by agronomists who, by and large, have a tendency to believe that any conservation end that can be achieved with trees can be better and more cheaply done by agronomic methods.”<sup>40</sup> These fears were justified, as the PSFP effectively ended that year.

The condition of the Nebraska shelterbelts regressed over the years. A 1944 survey conducted by the SCS showed that 83.1% of those planted from 1935 to 1938 were in good to excellent con-

dition.<sup>41</sup> “Many shelterbelts should remain effective to the end of the century,” the report concluded.<sup>42</sup> The coming decades, however, saw a steady decline in quality. In 1954, Ralph Read, a USFS researcher stationed in Lincoln, determined that only 42% were “good to excellent” barriers. By 2008, Steve Rasmussen, Northeast District Forester for the NFS, believed that most of the PSFP plantings were gone. Center pivot irrigation, larger farming equipment, other desired uses for the land, and tree age were among the principle reasons for their destruction.<sup>43</sup> Nevertheless, these shelterbelts proved beneficial to improving crop production, reducing soil erosion, and adding aesthetic value during their lifetime. Their legacy lives on in the countless windbreaks planted and pioneered across the “Tree Planter’s State”.

### EXTENSION EXTENDS INTO THE FUTURE

Even as the nation went to war and the PSFP shut its doors in downtown Lincoln, the Extension Service continued its activities unabated. Clayton Watkins retired in 1940, making Earl Maxwell once again the sole State Extension Forester. In many ways, Maxwell increased Extension’s educational presence. He and other members of the service would gather at the local radio station KFAB around 6:00 am each Monday morning to record a program called “Farm Notes from the College of Agriculture”. Maxwell boosted for the Clarke-McNary Program and shared findings from forestry research, best practices of tree selection and planting, ways to protect against tree diseases and jack rabbits.

Maxwell’s version of the “fireside chat” was especially popular due to his folksy personality and penchant for reciting poetry from his favorite writer, James Whitcomb Riley:

Nights by the kitchen stove,  
Shellin’ white and read  
Corn in the skillet, and  
Sleepin’ four abed!  
Ah! The jolly winters  
Of the long ago!  
We were not as old as now –  
Oh! No! No!<sup>44</sup>

The 4-H Forestry Clubs also continued to flourish under Maxwell’s leadership. From 1938 to 1941 the number of participating clubs ranged from 155 to 226. Starting in 1942, these numbers declined as clubs focused on projects “more closely related to food production to help win the war.”<sup>45</sup> Nevertheless, the 4-H Forestry Clubs planted over 450,000 trees from 1936 to 1950 and successfully made 90 percent of them grow. “Let’s encourage the young folks and the young trees

to grow up together,” he would often say.<sup>46</sup>

Perhaps the most important new project developed during the 1940s was the Emergency Rural Fire Control system. Early in 1942, the U.S. Department of Agriculture gave the Agricultural Extension Services of land-grant colleges the task of creating a fire prevention program. Maxwell and the county extension agents went to work that year to appoint rural fire wardens and to develop a system of communication. Homemade compasses were handed out. Fire tool houses were spaced strategically across the prairies, including torches, shovels, kerosene, and matches.<sup>47</sup> Maxwell also taught the new fire wardens and other farmers how to prevent and fight fires.<sup>48</sup> “Careless matches help the Axis [Germany and Japan],” Maxwell said as he stressed the need for vigilance.<sup>49</sup> It would not be until 1960 that Fire became an official program within the state forestry system; yet Maxwell and his county agents had sown the seeds during World War II.

In his final decade of work, Maxwell also remained very busy with the Clarke-McNary program. From 1940 to 1950, Nebraskans ordered an average of one million trees per year.<sup>50</sup> All of the above was spearheaded by this one man. But, as we all know, the flesh will get weak. Maxwell announced his retirement in late 1952, and the affectionate sentiment that rolled in showed the depth of his impact. “It would be a better world to live in if everyone were as devoted to his work as you have been,” wrote a couple from Holbrook.<sup>51</sup> From the President of Doane College: “I know that you have played a big role in the development of forestry in Nebraska, and as the years go by the people of this state are going to be more and more grateful to you for this.”<sup>52</sup> And John Reynolds, Douglas County Extension Agent, felt compelled to come up with a couple of stanzas for the poetry-lover he respected:

It's great to have worked in Nebraska,  
In planting and caring for trees  
And I'm glad you can sit and remember  
And enjoy your well-earned ease.  
Your work will live on in Nebraska  
For it sprang from a noble heart  
You've given a hand to creation  
In those plantings you helped to start.<sup>53</sup>

Soon after Maxwell's death, the Board of Regents took steps to memorialize his tireless work. On the space Maxwell used to experiment on seedlings, the University dedicated the Earl G. Maxwell Arboretum in 1969 on today's UNL East Campus.

CHAPTER FOUR

## EXPANDING THE STATE FORESTER DUTIES

*(1952 - 1967)*

Pearria, or Grass Fires, the great dread and fear for the early day settlers of the Great Plains, and cattle countries of Nebraska and South Dakota ... Many times groups of settlers would get together and study and make plans ... very often two riders would locate a grazing bunch of cattle, not wasting much time in locating the most unvalued critter, a bullet from a forty five and the brute was dead, then the hide slit full length down the belly ... a rope placed around the neck, another around the hind legs, and the drage (sic) of the flames would be on ... the carcass of a nine hundred pound brute will drag out three or four miles of fire before becoming dragged out. But the stunt worked.

- Frank Piersall, Brown County, recollections of the 1890s

Pioneers of the Great Plains had always been resourceful, using whatever means necessary to ensure the survival of their family and neighbors. Prior chapters have shown how settlers defied common wisdom to plant trees and harvest crops in the “Great American Desert.” Succeeding generations would overcome the great hardships and devastation of the Dust Bowl in part by building shelterbelts and windbreaks. Much of the forestry activity within Nebraska during the first half of the twentieth-century focused on aiding and encouraging such tree planting: the University’s windbreak research, state and county extension agents’ administration of Clarke-McNary, and the greatest number of shelterbelt miles planted of any state in the PSFP.

Yet Nebraskans faced many challenges which tree planting alone would not solve. Spotty rainfall and harsh winds not only evaporated moisture and blew away topsoil, but the resulting wildfires could destroy in seconds what farmers and ranchers had accumulated in generations. Crops and livestock killed, homes and barns burned, the very existence of families threatened.

As the above quote from Frank Piersall illustrated, settlers relied on ingenuity and cooperation in battling the prairie fires which routinely ravaged the Great Plains.

If state forestry was to continue to grow its value for Nebraskans, the establishment of a more comprehensive and organized fire program would be a good place to start. The 1950s and '60s would see a marked increase in the breath of services offered by a burgeoning, if still nebulous, state forestry system.

## NEW LEADERSHIP

During Earl Maxwell's time in the State Extension Forester's office, the Clarke-McNary program distributed more than 17 million trees for the shelterbelts and farm windbreaks and woodlands.<sup>2</sup> Maxwell also spent long days educating the public throughout the state, inspiring enthusiasm through 4H Forestry Clubs, and developing materials for a fledgling fire program. Karl Loerch assumed these duties and the title of University Extension Forester in early 1953. A "State Forester" still existed under the University umbrella, but it remained a nominal position within the Conservation and Survey Division (see chapter 3). Citizens across the state acknowledged the Extension Forester as the "man from the College", or "the expert" who appeared on the local meeting programs arranged by county agents.<sup>3</sup> In other words, Karl Loerch was in effect, if not in title, assuming the role of State Forester. A native Nebraskan, Loerch did some of his undergraduate work at Nebraska, received his B.S. degree in Forestry from Iowa State College (under Nebraska graduate and Forestry Department Head G. B. MacDonald), and earned his Masters degree from the University of Minnesota. His educational background, combined with his practical experiences as county extension agent in Pierce County and assistant extension forester since October 1952, made him a logical choice to oversee an expanding forestry program.<sup>4</sup>

The mid-1950s would prove to be a period of significant growth. On November 3, 1956, the Board of Regents made an agreement with the U.S. Department of Agriculture Forest Service for "providing technical forestry assistance to Nebraska farmers under the Soil Bank program."<sup>5</sup> This program involved, among other activities, using diverted cropland for shelterbelts, windbreaks, and woodlots. In addition, the University agreed to "promote the tree-planting phase and assist the state and county Agricultural Stabilization and Conservation committees with forestry services." Most of these activities sounded familiar, as various University departments and positions had been performing them in one form or another for the past half-century. However, as future State Forester Dr. Gary Hergenrader explained, to understand the workings of government forestry, or government of any type for that matter, you must "follow the money." The Soil Bank program and the Cooperative Forest Management Program of 1950 would, according to Chancellor Clifford Hardin, provide federal money on a matching basis.<sup>6</sup> Offsetting state funds would mostly come from the University Extension Service.



The Board of Regents appointed Karl Loerch as State Forester and moved the position into the College of Agriculture on December 1, 1956, thereby finally marrying the title with the individual performing the duties. He was charged with carrying on his present activities as Extension Forester and developing the two new cooperative agreements with the USFS. Forestry activity was increasing in lock-step with increased funding. Clarke-McNary allowed seedlings to be purchased for cost (about \$3.25 per hundred in 1956), mostly from Bessey Nursery and Plumfield Nursery of Fremont. Farmers could then apply for aid through the Soil Bank plan. Federal aid amounted to “about 80% of the cost of purchasing, planting and cultivating the seedlings for one year.”<sup>7</sup> According to Loerch, over 3,000 Nebraska farmers utilized the state and federal programs to plant over 1.5 million trees in 1956.<sup>8</sup> Due to expanded responsibilities, the office of the State Forester would slowly begin to acquire a dedicated staff, starting with three new district and extension foresters in 1957.<sup>9</sup>



*Karl Loerch, State Forester*

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## FOREST RESEARCH AND HORNING FARM

As the office of State Forester assumed increasing duties, the University prepared to increase its research to a level not seen since the elimination of the Forestry Department in 1915. The Department of Horticulture hired Walter Bagley in 1955 to develop a tree improvement research program at the Nebraska Agricultural Experiment Station. The US Forest Service also created a “Research Work Unit” within the University of Nebraska in 1953, “in cooperation with the Agricultural Experiment Station, and staffed it with a silviculturist (Ralph A. Read).”<sup>10</sup> From its beginning, the goals of this cooperative team were defined as that of “finding adapted seed sources of native and introduced conifer and hardwood species, developing genetically improved sources of seed, and reducing the detrimental effects of diseases and insects in Great Plains tree plantings.”<sup>11</sup>

Although most of the researchers involved in the tree improvement program would never directly become part of the future Nebraska Forest Service, their accomplishments are mentioned here for their contributions to Rural Forestry and their connections to Forest Health. Bagley, Read, and their colleagues performed provenance and other tests which “revealed seed sources which are rapid-growing, well-adapted, resistant to disease, and tolerant to insects in the Nebraska environment.”<sup>12</sup> Those improved seed sources were then promoted and distributed by Loerch and



U.S. Forest Service

*Tree Planter, Nebraska 1963, specific location and individuals unidentified*

the county extension agents through the Clarke-McNary Tree Distribution Program. In addition, a few future NFS employees would have responsibilities related to this tree improvement research, including: William Lovett (tree improvement specialist), William Ostrofsky (pest management specialist, 1976-1979), and Mark Harrell (pest management specialist and current Forest Health program leader, 1980 to 2017).<sup>13</sup>

Horning Farm has served as a principal location of research for both the tree improvement program and future NFS projects. Ticia Blanche Horning Griffin and Eliza Olive Horning, retired teachers, had inherited a 240-acre farm south of Plattsmouth from their pioneering family. Both sisters filed wills which bequeathed the family farm to the University of Nebraska “to be used solely for the School of Agriculture as a fruit farm, or for forestry purposes, or an experiment station, and I direct that said lands shall not be disposed for any other purpose, and I request that said farm be named Horning State Farm.”<sup>14</sup> Tragically, their wills would be executed at the same time in the summer of 1949. The prior December, Blanche was found bound and dead, and Olive was in her bed with her head crushed. Their valuable antiques from the Civil War era were nowhere to be found in the ashes of the burnt home.<sup>15</sup> Due to their generosity and love of trees, however, their legacy lives on in the accomplishments of the Horning State Farm. Indeed, when the Board of Regents ordered all farms donated to UNL to be sold in 1958, Horning was the only one held onto, due to the explicit wording of the sisters’ wills.

In 1959 Dean Lambert placed Horning State Farm “under the jurisdiction of the Department of Horticulture with a statement that he hoped some research projects could be initiated immediately.”<sup>16</sup> The first project, under the direction of Bagley and starting that same year, compared the survival and growth of ten tree species treated with three herbicides. Projects such as these also benefitted from the Cooperative Forestry Research Program, which provided the University with



matching funds from the federal government starting in 1964.<sup>17</sup> The USFS installed several field trials at Horning Farm throughout the next twenty years. “The regional tree improvement program,” wrote Bagley, “got into high gear during the decade of the sixties with the establishment of provenance plantations of Scotch, Austrian, jack, red, limber, ponderosa and white pines, Douglas-fir, red oak and hackberry.” This research would last into the late 1990s and result in numerous publications in conservation and forestry journals.<sup>18</sup>

## **DEPARTMENTAL CHANGE**

Not since the elimination of the Department of Forestry in 1915 had the term “forestry” appeared in the title of any University department or institute. The addition of “Forestry” to the name of the Department of Horticulture in 1959, therefore, signified how far the field had rebounded. The State Extension Forester was now recognized as the State Forester, agreements with the USFS had expanded the office’s responsibilities and funding, Horning State Farm was now assigned to the department, and tree improvement and windbreak research had put the University back on the academic map. The new Department of Horticulture and Forestry also offered classes in Rural Woodlands<sup>19</sup> (starting in 1937) and Tree Resources (starting in 1955).<sup>20</sup> The momentum was palpable, and the state forestry system would really catch “fire” with the organization of its next program.

## **FIRE PROGRAM ESTABLISHED**

“I thought it was one of the dumbest ideas I’d heard of,” said Don Westover.<sup>21</sup> One of his first assignments after coming to the NFS in 1975 was to solicit first-hand accounts of the fires which swept across Nebraska over the past century. “While many stories have been written about specific prairie fires,” Don wrote in a news release, “it is unwritten but vivid accounts – still in the memories of older Nebraskans – that someday will be gone forever.”<sup>22</sup> Don half-heartedly put out the request expecting to get maybe a couple responses. He received over 40. Most of the harrowing stories described turn-of-the century families trapped in sod houses, men and boys doing their best to work as teams, burning jack rabbits spreading the fires into barns, women and children digging out barren areas and stuffing the house with wet towels. “As a youth,” wrote one of the respondents, “(my grandfather) told me their greatest fear was of prairie fires. Grandmother, he said, would watch to the west continuously for fires and many times they could see them burning in the night sky.”<sup>23</sup>

The fear and threat of wildfires remained significant issues throughout 1900s Nebraska, and by mid-century, the state forestry system was increasingly joining the battle. Maxwell and the

county extension agents developed the Emergency Rural Fire Control system in the mid-1940s, which included rural fire wardens, fire tool houses, and a system of communication. However, a big step forward was taken in 1957 when Nebraska agreed to cooperate in Section 2 of the Clarke-McNary Law, Forest Fire Cooperation.<sup>24</sup> Matching federal funds from Clarke-McNary were offset by state funds from the University Extension Service.<sup>25</sup> By 1960, the State and District Foresters were using the funds from CM2 (the name popularly used for the Fire Control Program until the early 1970s)<sup>26</sup> to organize the state into rural fire districts and provide training, education, and firefighting equipment.

Around that same year, the office of the State Forester began to participate in what Don Westover called an “uncharacteristically non-wasteful program from the federal government”, the Federal Excess Property Program (FEPP). As part of CM2, the State Forester was authorized to purchase surplus federal vehicles, many from World War II and the Korean War, to be converted for firefighting use. “Dump trucks, weapon and cargo carriers, jeeps and station wagons from bases such as Offutt, Lincoln, Ft. Riley and Camp Carson”, read a promotional article from the mid-60s, “have been given to rural districts through this program.”<sup>27</sup> Don Westover explained the popularity of the program:

Each rural fire district is a legal entity. They have a board and can levy taxes. However, most directors are farmers, landowners, and ranchers and are pretty conservative with taxes, and most of their constituents are just like them. Therefore, rural fire districts operate on a shoe-string [budget]. That’s what makes our programs so popular. We can provide them with a six-by-six that can go anywhere. We’ll put a tank, pump, lights and sirens on there, recycle it through the program, make sure it’s safe and in good running order. We performed this work in our shop at the Lincoln Air Park, and would offer it to the rural fire districts for just the cost of transportation.<sup>28</sup>

By 1965, 105 rural fire districts west of Grand Island had received assistance, and those numbers would grow to 450 districts receiving 1109 refurbished government vehicles by 1980.<sup>29</sup> This represented about \$15 million in equipment and half of all the fire trucks in the state.<sup>30</sup>

Another leg of the Fire Control Program was born in 1965 soon after lightning struck dry grassland near the Bessey Division of the Nebraska National Forest. Within the day, flames driven by 25 to 35 mile an hour winds destroyed an estimated 1.5 to 2 million trees in the Halsey Forest. The damage would have been significantly worse, however, if not for air fire experts flown in

by the USFS. A converted B-26 bomber and two ex-Navy torpedo bombers were shuttled out of North Platte and dumped thousands of gallons of chemical fire deterrent.<sup>31</sup> Prompted by this notorious forest fire, the Nebraska Legislature passed LB926 later in the year, establishing “an emergency firefighting fund in the state treasury and authorizes the governor to spend money from it to prevent, control or extinguish fires that are a hazard to state and private lands.”<sup>32</sup>

One of the areas which would be funded through the measure was aerial fire control.<sup>33</sup> The State Forester’s office and rural fire districts coordinated with the Nebraska Emergency Management Agency to contract with crop-dusters for prairie and forest fire control. These planes could either jettison their load through a quick dump gate, or crack it open part way to let out a long string effective for wildfires. Retardant used to be made with the agricultural fertilizer ammonium disulfide, but it was found to be corrosive to the planes. Later a class A foam concentrate was invented which has proven to be effective and non-corrosive.<sup>34</sup> From dragging the carcass of a nine hundred pound beast through burning prairies to dumping chemicals in an aerial attack – fire control had come a long way.

### **STATE FORESTER POSITION CLARIFIED**

In 1921 the Conservation and Survey Division was given the authority to appoint a State Forester, but the position remained largely nominal due to a lack of appropriate funding. In 1929 the Game, Forestation and Parks Commission was also charged with performing significant forestry activity, but their participation resulted in little more than biennial reports. The increase in extension forestry activities and the cooperative agreements with the USFS in 1956 led the Board of Regents to unite the offices of State Forester and State Extension Forester. Due to overlapping state statutes and at the urging of the USFS, the legislature moved in 1967 to clarify the duties of the State Forester.<sup>35</sup> Incorporating ideas from the Dean of the College of Agriculture, the Board of Regents, Karl Loerch, and J.O. Young (Chairman of the Department of Horticulture and Forestry), LB 682 “transferred the powers and responsibilities formerly vested in the then State Game, Parks and Forestation Commission to the University of Nebraska and dropped the word Forestation from the title of the Commission.”<sup>36</sup> The law positioned the office within the University, although it “did not indicate to what college or division of the University the Office of State Forester should be attached. However, for many years (since 1959) the position has been in the Department of Horticulture and Forestry.”<sup>37</sup> The State Forester was now clearly defined as responsible for all forestry education, service programs, teaching, demonstration, extension activities, and publications. LB 682 also empowered the Board of Regents to “employ such personnel to work under the State Forester as it shall deem necessary or advisable.” Nebraska state forestry was positioned for further growth, and the USFS had a definite point person to serve as a conduit for its federal funds.

*4-H club members plant trees during the Dirty Thirties*



*Archives and Special Collections, University of Nebraska-Lincoln Libraries*

*Nebraska Forest Service*



*District Forester Larry Barber with former state champion cottonwood tree, circa 1970s*

*Plumfield Nursery Worker, PSFP era*



*Archives and Special Collections, University of Nebraska-Lincoln Libraries*





*Aerial support battling June 2012 Cottonwood Fire*



Nebraska Forest Service

*Forestry field day, 1981*



Nebraska Forest Service

*FEPP Supervisor Lew Sieber talks over equipment with Murdock Volunteer Fire Department, 2006*





*Red oak stand at Horning State Farm Demonstration Forest, 2016*



*Sunrise at Chat Canyon Forestry and Wildlife Management Area, 2013*



CHAPTER FIVE

## FORMING THE NEBRASKA FOREST SERVICE

(1967 - 1977)

Karl Loerch was the best of all possible bosses. He was quiet. He never made a fuss. You always knew where he stood. And most important he made things happen. He made things grow.<sup>1</sup>

- Ellsworth "Buzz" Benson, 1984

Karl Loerch indeed made the state forestry programs grow. During his leadership from 1953 to 1970, the position of State Forester became clearly delineated in state law, agreements with the USFS increased and stabilized funding, "Forestry" was added to the Department of Horticulture, tree improvement research expanded, and an organized fire prevention program was established. A common theme in Nebraska forestry is the link between a strong leader and significant growth. Karl Loerch was no exception. Although quiet, Loerch exuded a spirit which revealed his love of forestry, a fun-loving attitude similar to Phillips or Maxwell. In 1960 Loerch and a nurseryman named Jim Moore convinced Governor Frank Morrison and the state legislature to fund a program to plant hundreds of thousands of walnut seedlings on non-farmable land. In an effort to promote the program, Governor Morrison planted one of the seedlings on the southeast corner of the Nebraska State Capital surrounded by Loerch, Jim Moore, and the assembled press. The nurseryman recalled what happened after the event was over:

"Hey, Jim," Loerch said, "what happens if that damned nut the governor planted doesn't grow?" We ran back and planted two more nuts. Then once again we ran to the east steps. Now I spoke: "What if we got a bad

bunch of nuts and none of them make it?” We started laughing. We ran back a second time and planted two more nuts. Five were now in the ground. And then, howling like a couple of demented banshees, we ran back into the Capitol for the governor’s party. All five seedlings grew.<sup>2</sup>

Karl Loerch’s energy waned around the time of the 1967 state forestry law, as it was soon discovered he had developed symptoms of lymphatic cancer. Loerch would battle his condition for several years, receiving radiation and chemical treatments while attending to the expanding duties of State Forester. In September 1970 he suddenly succumbed to his disease. Not since Professor Phillips died six decades earlier had Nebraska Forestry lost an inspiring leader so abruptly. Ellsworth “Buzz” Benson, assistant State Forester under Loerch, was immediately appointed Acting State Forester, and in 1971 the position became official. Benson would lead the organization into the next decade, and the seventies would prove to be a time of great administrative change and growth.

### **INSIDE THE DEPARTMENT OF HORTICULTURE & FORESTRY**

By 1972, the office of the State Forester included eight professionals: the State Forester (Buzz Benson), a Fire Control Specialist (Joe Range), a Marketing and Utilization Specialist (Ralph Monahan), and five Regional Foresters (Dick Gavit, Jerry Mohler, Gary Christoff, Larry Barber, and Neal Jennings).<sup>3</sup> J. O. Young, Chairman of the Department of Horticulture and Forestry, believed the time had come to make a thorough study of the forestry program. “It appears to me,” Dr. Young wrote in December 1972, “a good time to pause for a year for reorientation, for regathering of our forces, and for the formulation of an updated Forestry plan in the University of Nebraska. I think it would be best to complete this plan before attempting to define the future job of the State Forester and before employing a new man.”<sup>4</sup>

Buzz Benson joined the state forestry system in 1957 as a District and Extension Forester. Always well-liked and respected, Benson was the unanimous choice of Acting Department Chairman, Bob O-Keefe, and the entire forestry staff to replace Karl Loerch. Indeed, he had been performing admirably the last two years. However, he was approaching 65 and was expected to retire, as were all University administrators of the same age. J.O. Young wished him to continue until the proposed study was completed. This study, pivotal as it was, proved to be the source of much friction.

On March 13th, 1973, John Adams, Director of the Cooperative Extension Service, expressed his disappointment to Chairman Young that the Department had not begun to look for a new State Forester. “We have lost three months of valuable recruiting time,” Adams wrote, “at

a period when many Foresters are looking around because of federal cutbacks. I hope you will proceed without further delay.” Director Adams also warned that, although he saw the merit in conducting a thorough study of State Forestry, the Extension Service could not afford to fund the estimated \$5,000 to \$10,000 cost of the study. In addition, Adams made clear his budgetary priorities:

I’m sure you are aware that vacancies such as that of State Forester are not automatically reallocated to the same department. All entities of UNL went through the process of a 5% reduction and reallocation this year and Extension was not excepted ... Forestry, though important, is no more so than several of our other programs. I can make no commitment at this time to hold the vacancy in Forestry past July 1st [1973].<sup>5</sup>

This correspondence disturbed Chairman Young, who subsequently sent a letter to E. F. Frolik, Dean of the College of Agriculture, with copies to the Extension Directors and the staff of the Department of Horticulture & Forestry. Dr. Adams had refrained from answering repeated written requests, Young argued, concerning the retention of Benson as State Forester for the period during which the previously proposed Forestry Survey would be conducted. In addition, the Department Chairman himself was qualified to conduct such a survey, with the help of the forestry staff, and without funding from the Cooperative Extension Service. “In the circumstances,” Young claimed, “the Directors [of the Extension Service] should have constructively stimulated such a review, not delayed or obstructed it. I do claim that the purported urgency of filling the State Forester’s position with a new man by July 1, based on expediency, is outweighed by long-range considerations that were to be investigated in the survey.”<sup>6</sup> Young was also perplexed as to why Dr. Adams implied that the State Forester position might be abolished if a new person was not found by July 1. “The position is established by law,” Young noted, “and no study is likely to result in the abolition of the position.”<sup>7</sup>

Dr. Adams responded by saying that he never suggested that they operate without a State Forester, and that there are several people in the department “legally qualified” to fill the position on an acting basis if needed after Benson’s retirement. However, as the State Forester was a member of the academic community and served in an administrative capacity, Adams wished to see the next State Forester exceed the minimum legal requirement of a B.S. degree in Forestry.<sup>8</sup> As for Young’s proposed Forestry Survey, Adams made it clear that the Extension Service would not be contributing any out-of-pocket funds for the survey. Ultimately, Young and the Department of Horticulture and Forestry conducted a smaller scale internal review.

After much internal wrangling, Benson would be retained for another year as Young

officially announced the position opening in May 1973. In mid-November 1973, the Department recommended that Gene Grey of Kansas State University be offered the position. Although he did not possess the desired PhD, the Department believed that the “splendid achievements attributed to Gene Grey by his colleagues in Kansas and nationally” made him by far the best candidate.<sup>9</sup> But again, Dr. Adams disagreed. He insisted that the new candidate possess a PhD, and he would not support the Departmental recommendation. Accordingly, Young went over his head and appealed to the Dean of the College of Agriculture, H. W. Ottoson. Dean Ottoson concurred with the decision of Director Adams, stating that the Director had not acted “capriciously” in the recruitment procedure and had not been motivated “by any desire other than furthering the cause of the Extension and forestry activities by upgrading the qualifications of the State Forester.”<sup>10</sup> The Dean also agreed that a PhD was highly desirable due to the planned relationships between extension, teaching, and research.

Chairman Young, however, was not quite done reacting to the situation. He objected to Dr. Adams’ accusation that he was trying to take over the authority of the Extension Director and that he did not involve Dr. Adams sufficiently in the search process. In addition, Young also complained that the search had been hampered by the strict educational requirements:

A job description prepared in concert with the Director and the Assistant Director listed the minimum education requirement at the Master’s Degree. It was pointed out that of all the fifty State Foresters in the U.S., none hold the Doctorate, a few hold Masters Degrees, and all the remainder the Baccalaureate Degree only ... now at the end of this prolonged nation-wide search, including a five-week delay in responding to our Departmental recommendation, we are told the PhD is the over-riding criterion ... the Directors, who also lack Forestry degrees, appear to feel better qualified than the Department to stake out the future needs, opportunities and plans for Forestry. This might be considered capricious.<sup>11</sup>

Nevertheless, the Director’s objection stood, and Gene Grey was informed that the Department had temporarily suspended its search. Professor Grey, incidentally, would go on to influence national forestry legislation and become a leader in Urban Forestry at Kansas State University.

## CREATION OF THE DEPARTMENT OF FORESTRY

Buzz Benson retired on July 1, 1974 after having stayed an extra year beyond normal retirement. Chairman Young was named Acting State Forester and a new search for a permanent replacement began.<sup>12</sup> Yet the administrative issues and conflicts remained unresolved. J. O. Young still wanted a thorough review of the program before deciding upon a course of action, and Extension Director Adams felt that his authority was being usurped. Chairman Young expressed his concerns about the future of Nebraska forestry to Dr. Duane Acker, the new Vice Chancellor of the Institute of Agriculture and Natural Resources (IANR):

State Forestry at the University of Nebraska may be likened to a seed that has been failing to germinate. This is not due to lack of nourishment, for there are ample funds from the U. S. Forest Service and tenders from other sources, such as the Lower Platte South NRD. What, then, is the cause of the dormancy? It is not lack of moisture and light, for we have a new Vice Chancellor who has taken the leadership to explore alternatives as a prelude to removal of the obstruction to germination. Perhaps it is just a hard seed.<sup>13</sup>

The “hard seed”, according to Young, was caused by legal, academic, and administrative restraints that prevented the adoption of comprehensive forestry goals and a clear organizational structure.<sup>14</sup>

Vice Chancellor Acker called a meeting of nineteen interested parties on July 22nd 1974, including Young, Adams, Gavitt, and Horticulture and Forestry Associate Professor Walter Bagley. After discussing the future of state forestry work, they projected that personnel would grow from 8 in 1975 to 23 by 1980, and their budget would correspondingly increase from \$582,000 to \$1,375,000.<sup>15</sup> The present structure of the Department of Horticulture and Forestry was not sufficient to handle the projected expansion. In addition, the assembled Forestry staff expressed the conviction that the annual \$76,000 in state funds via the Cooperative Extension Service was provided “for action programs” rather than for Extension education. The staff also felt inhibited by “Extension requirements” which held little relation to Forestry goals. Therefore, the group reached a consensus that a new structure should be implemented that could better manage the proposed growth and align exclusively with forestry goals.

Five alternatives were delineated and briefly discussed, and two of them appeared to be the most favored options. One of these involved forming a State Forestry Division within the Univer-



*Dick Gavit educates youngsters at a forestry field day*

sity and separate from the departmental structure, similar to the contemporary set-up at Colorado State University and Texas A&M. Forestry would be exclusively an action program, lacking any teaching, research, or traditional extension duties. “Any educational effort would be incidental,” summarized Acker, “and any communication between action personnel and those involved with University Extension work, classroom teaching or research would be at the pleasure of individual personnel and their leaders.”<sup>16</sup>

The second principle option was the formation of a separate Department of Forestry. A single administrator would be charged with hiring and managing of all personnel involved in classroom teaching, University research, University extension, and action programs. Acker acknowledged how significant federal action programs were in his report. Through the USFS, CSRS, and the Corps of Army Engineers, the Federal Government invested \$383,000 in Nebraska in 1974, compared to the state’s contributions of \$76,000 for “forestry extension” and about \$50,000 in forestry research. Nevertheless, the Vice Chancellor admitted to the University’s “natural bias that much progress is made by education.”<sup>17</sup> Due to the projected growth of forestry programs and staff, the decrease in administrative layers, and the continued desire for robust forestry education, the University administration recommended the creation of a separate Department of Forestry. Without further consultation with department staff, the Board of Regents quickly approved the establishment of separate departments of Horticulture and Forestry on September 7, 1974. The State Forester would serve in the dual role of Chairperson<sup>18</sup>, and would to report to the Dean of the College of Agriculture for the teaching program, the Director of the Agricultural Experiment



Station for research, and to the Director of Extension for extension and action programs.<sup>19</sup> that is three bosses – the unholy trinity of administration.

Rumblings of discontent echoed through the halls of East Campus. Horticulture and Forestry Professor Walt Bagley said that the decision “wasn’t based on a lot of input from the staff,” and he worried that the forced separation would weaken the teaching programs of both departments. Classes such as Urban Forestry and Ornamental Horticulture covered similar content, and he was concerned that faculty coordination might suffer. Other “borderline” courses raised unaddressed questions of how and to which degree to award credit.<sup>20</sup> Bagley was also the only staff member with a joint appointment to each department in teaching and research, and would now be working for two bosses. His “main concern,” however, was that the regents approved the departmental division “hastily and routinely, with no chance for the public to know the pros and cons.”<sup>21</sup>

Horticulture and Forestry Professor Robert O’Keefe, one of Bagley’s colleagues, recalled that the proposed division was discussed in three meetings with foresters and in one with horticulturists in late July. “But as horticulturists,” he noted, “we weren’t informed of the decision until about three or four days before it was to go to the regents.” After attending the Scottsbluff regents meeting in September, O’Keefe did not believe they discussed the matter at their private meeting before the Saturday public session, when “the actual decision was made – Boom!”<sup>22</sup>



Prairie Pines Falls

Walt Bagley at his home, later named Prairie Pines, 2002

Immediately following the regents’ decision, J.O. Young resigned as Acting State Forester and Chairperson of the formerly combined department, claiming that he did not want to “participate administratively in the restructuring.”<sup>23</sup> Richard Gavit was named Acting State Forester and Chairperson of the new Forestry Department on September 15, 1974.<sup>24</sup> “The majority of the department did not want to separate,” former Chairperson Young said a couple weeks later, “but the administration did and the administration prevailed.” He also questioned whether the “regents get their information filtered through the administration rather quickly,” and he hoped that the regents would open up their meetings more. “There will be a time period here of a few months,” he predicted, “when a few of the staff will be wondering what the future is.”<sup>25</sup>

Vice Chancellor Acker tried to calm the discontent, saying that the fears were “entire-



ly normal. Anytime there's a reorganization, there are apprehensions and concerns ... we have had an enduring problem in forestry ... and this is a first step" toward a solution.<sup>26</sup> Acker was determined to see that both teaching programs remained strong, "whether large or small," and he would solicit advice from both departments on their undergraduate programs, training needs, extension programs, and on the required and desired traits of the next State Forester. J.O. Young left his position saying that he was not "disgruntled or peeved about it," and both he and Professor O'Keefe would support Acker's move. Bagley would sit on the State Forester search committee and was "willing, now that it's done, to make (the new structure) work."<sup>27</sup>

### **CREATION OF THE NEBRASKA FOREST SERVICE AND THE DEPARTMENT OF FORESTRY, FISHERIES, & WIDLIFE**

On June 1, 1975 the University administration hired Dr. Mitchell Ferrill as the new State Forester and Department of Forestry Chairperson, thereby setting a precedent that the State Forester hold a PhD. Ferrill came from the Natural Resources Conservation Department at the University of Connecticut where he spent most of his time teaching ten different forestry classes. He had also previously worked with the USFS experiment stations at Berkely, California, Stoneville, Mississippi, and Denver, Colorado. As he assumed his new dual role, Ferrill would now be in charge of teaching, research, extension duties, and numerous action programs. His first tasks were to develop goals for the new department and decide how to appropriate the new department's \$1 million budget. "We want to do the best for landowners," he said in his first few weeks at UNL. "I would like to make this department function like a team."<sup>28</sup>

Ferrill and his department were also seeking ways to increase the visibility of their state forestry activities. The issue had been an ongoing challenge within this agricultural state, and being imbedded within the University's administrative structure seemed to exacerbate the problem. In addition, the USFS wished to see Nebraska create a "more clear-cut identity and visibility for the action programs" for which it provided significant funding.<sup>29</sup> These action programs included rural community fire protection, forest management, tree production and distribution, forestry resources inventory, forest pest control, watershed protection, and others. Due to the support and lobbying of both the USFS and the Nebraska Department of Forestry, on June 25, 1977 the Board of Regents created the Nebraska Forest Service as a division within the Department of Forestry. Vice Chancellor Massengale wrote that:

Designation of a Nebraska Forest Service as a division of the Department of Forestry would (1) improve visibility across the state of the action program, (2) improve understanding of the nature of the action program

within the University as well as among lay people of the state, and (3) recognize the unique accountability of the action program to the people of the state and to the U.S. Forest Service.<sup>30</sup>

Although the Nebraska Forest Service was not officially recognized by the Nebraska State Legislature, it now had—for the first time—a clearly delineated public face within the University structure. As detailed in the next chapter, growth in the state forestry system would continue through the 1970s. Yet the departmental structure, contentious from the beginning, remained tenuous. By 1976, another restructuring plan was gaining support. The Department of Poultry and Wildlife Science contained two distinct curriculums with little in common. Administrators floated the idea of eliminating this department and having the poultry specialists join the Animal Science Department and the wildlife programs combine with the Department of Forestry. According to IANR Vice Chancellor Massengale:

The principal advantages of the reorganization are (1) greater affinity of similar programs, (2) closer working relationship among scientists with the new administrative alignment, (3) possible elimination of some duplication in activities, particularly in teaching, and (4) reduced administrative requirements.<sup>31</sup>

Massengale consulted representatives of the poultry industry and of forestry and natural resources over the next year. Support for the plan indeed appeared to be more unambiguous than the 1975 decision to divide the Department of Horticulture and Forestry. On July 1, 1977, Wild-



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*The newly created NFS moves into the Plant Industry Building*

life Science was officially added to the Department of Forestry and renamed the Department of Forestry, Fisheries, and Wildlife (FFW) within the IANR. The administrators then positioned the week-old Nebraska Forest Service inside the FFW.

The 1977 creation of the NFS could not have come at a better time, as the following year Congress passed legislation which, according to future State Forester Dr. Scott Josiah, “gave rise to steady USFS funding.”<sup>32</sup> The 1978 Cooperative Forestry Assistance Act consolidated a broad range of State and Private Forestry program authorities “involving fire, forest management, forest health, wood utilization, urban forestry, and organizational management assistance to State forestry agencies.”<sup>33</sup> Nebraska would take full advantage of these funding activities and grow several of their programs throughout the coming decades.

CHAPTER SIX  
**GROWTH AND CRISIS**  
*(1977 - 2003)*

At the old NFS staff meetings in the 1970s and 80s, myself, Don [Westover] and Bill Lovett and many of the district foresters were young and new. We had some damn big parties at those staff meetings, swinging from the rafters ... back then it was the Kansas Forest Service that seemed old and boring ... now it's us.<sup>1</sup>

-Dennis Adams, soon after retirement, 2015

The staff hired in the 1970s were all young and largely in the same stage of life. They formed unusually strong bonds. They worked together, played together, and hunted together. The youthful energy which had many of the NFS professionals occasionally “swinging from the rafters” would also produce decades of dynamic growth for the state forestry system. At its inception in 1977, the NFS was divided into three sections: (1) Wildland Fire, (2) Field Operations, and (3) Support. Primary objectives included providing technical assistance and service for protection from fire, insects, and disease of Nebraska’s trees and providing technical assistance and service for management of Nebraska’s urban and rural forest resources.<sup>2</sup> Given these quite general mission statements, the initial NFS was not organized in a way which would explicitly foreshadow its shape today. Instead, the NFS would evolve more organically, like a riparian forest following the flow of its river. Activities and resource allocations from the 1970s through the 1990s were directed by the needs of Nebraska and the funds from the federal and state government. Reviewing the accomplishments of these decades allows one to hike the winding path to today’s NFS.

## RURAL FORESTRY

Long before there was an official Rural Forestry program, the necessary work had been performed under various names. Professors Miller, Phillips, and Morrill regularly corresponded with citizens across the state about the types of trees to plant, how to build windbreaks, and ways to halt disease and insect infestations. The Extension Horticulturists and Foresters of the 1920s to 1950s distributed millions of seedlings and demonstrated the best ways to prevent soil erosion. By the 1970s, these and similar projects were being performed by District and Extension Foresters throughout the state and under the direction of the NFS. Into this milieu stepped a “rafter swinging” Dennis Adams.

Adams graduated from Iowa State University in 1968 with a B.S. degree in Forest Management. Before being able to use his degree in the traditional sense, the U.S. government insisted that he first “explore” the forests of Vietnam. After returning from a stint with the Navy in 1973, Adams heard of a forestry technician job opening from his old college roommate and then Nebraska District Forester Neal Jennings. Adams met with Buzz Benson for an hour on a Friday. By that Sunday, Benson offered him the job, which was sort of a “catch-all” position. While driving back to Lincoln to relocate, Adams said to his wife that they would be in Nebraska about six months. Forestry to him, as it was for many other foresters of that era, meant being out West somewhere, working in a big national forest. Forty-one years later, Adams retired in Lincoln after an accomplished career with the NFS.<sup>3</sup>

Among Adams’ first duties was helping the tree distribution program. Gary Christoff, the North Platte District Forester, directed the conifer distributions coming out of the Halsey National Forest. Adams assisted in the spring shipments from Halsey and picked up hardwood seedlings from private companies such as Plumfield Nurseries in Fremont, Nebraska and Yankton, South Dakota. The USFS had cooling units for the conifers, while the hardwoods were stored in a couple of outhouses. Adams also drove a semi-truck to Colorado to bring back potted trees, filling orders at county extension and Soil Conservation Service offices in western Nebraska. The administration of the Clarke-McNary Program, which started in Nebraska in 1926, continued to be one of the most important activities of the unofficial rural forestry program. Bill Lovett would take over the important responsibilities of the CM (Clarke-McNary) program in 1975.<sup>4</sup>

Adams then served in the newly created “Regional Community Forestry and Fire Planner” position, where he jointly (with Neal Jennings) developed the Community Forestry Program from about 1975 to 1977. However, it was during Adams’ stint as the Southeast District Forester from 1977 to 1992 that a “Rural Forestry” program took more definite shape. Dick Gavit, the Northeast

District Forester and one time Acting State Forester, took the lead in the late 1970s and 1980s in coordinating all the district forester's data and filing the required federal reports for the various cost-sharing programs. Dennis took over these responsibilities after Gavit retired in 1989. Finally, in 1992, Adams was officially named Assistant State Forester for Rural Forestry. Not caring about the title of Assistant State Forester, Adams and Fire Program leader Don Westover changed their titles to simply be the "Program Leader" of their respective fields, in the form used today. In short, increased funding and federal accountability led to the solidification of a Rural Forestry program within the NFS structure.<sup>5</sup>

## FIRE PROGRAM

Wildland fire protection and prevention had been one of the most clearly delineated and visible services provided by the state forestry system for decades. The Emergency Rural Fire Control system of the 1940s evolved into an official state forestry program in 1960. The Federal Excess Property Program (FEPP) and aerial fire control were a couple of the most successful fire prevention efforts in the state. NFS would continue to increase the temperature of its positive influence in the coming years.

Don Westover graduated from the University of Wisconsin with a Masters in Forestry in 1975. He heard about an opening for a new Fire Prevention Coordinator in Nebraska. In his prior summer job, Westover had served as a lookout on Yaak Mountain in Montana. After learning that the last lookout committed suicide, a job in Nebraska did not sound that bad. Westover was offered the new position during the interview (things were quite different back then) and was immediately put to work.<sup>6</sup>



Nebraska Forest Service

*Don Westover at 1981 Forestry Field Days*

One of Westover's first assignments was to develop an effective system to rate fire danger. In the mid-1970s, Nebraska had four different wildland fire rating systems and could not figure out which one was best. Westover took all the historical fire data available, compared it to the corresponding weather conditions, did a regression analysis, and determined that one of the methods was far superior.<sup>7</sup> From this method, Westover developed what the USFS called an "innovative and forward thinking fire danger rating system for Nebraska's unique forested and grassland landscapes, utilizing satellite imagery, real-time weather data and other variables to accurately charac-



terize wildland fire danger.” As of this writing, the National Weather Service still uses it as the official warning system for Nebraska.<sup>8</sup>

Eric Rasmussen was the one other person Westover worked with when he arrived in 1975. Rasmussen started in 1972 and would eventually become both the fire training manager and the FEPP equipment manager. As the State Fire Marshall was interested mainly in training on structural fires, Rasmussen focused on wildland fire prevention and supplied the Fire Marshall with funds to incorporate such techniques into his training programs. Dennis Adams, serving as Community Forester and Fire Planner, joined



Nebraska Forest Service

*Eric Rasmussen fights fires and smokes stogies*

Westover in 1976 in publishing annual reports on wildfires. They also created fire prevention kits for local fire departments and produced news releases and radio programs to educate the public.<sup>9</sup>

Bob Vogltance later joined the program as Fire Resource Manager/Prevention. Both Vogltance and Rasmussen developed good relationships with the volunteer fire departments and directly trained them in wildfire prevention. Vogltance and Larry Wiles, both State Fire Marshall deputies at one point, wrote community master plans, showed groups how to budget for equipment and replacement schedules, and assisted in the creation of mutual-aid districts and directories. Westover lamented that the robust nature of these mutual-aid activities has begun to suffer in recent years due to a general societal decline in volunteerism. “Meetings are losing their interest,” Westover said, “and people find more excuses to stay within their own narrow interests. Nevertheless, most fire trucks are still able to be filled with a diverse group of volunteers from various locations. Nebraska maintains active year-round prevention programs involving about 100 volunteer fire departments, largely due to the efforts of Bob Vogltance.”<sup>10</sup> In addition, the Partners in Prevention program, a volunteer fire prevention organization which Vogltance and Westover oversaw, received the Silver Smokey Award in 2009 from the USFS for “regional excellence in fire prevention programming”.<sup>11</sup>

Another significant challenge Nebraska faced in the 1970s and 1980s could be seen barreling through the countryside, lighting up the night like the Fourth of July. About 400 or 500 fires per year were caused by out-of-date trains with old fashioned bearings and sparks coming out of their exhaust. Trains of fire would rip through the semi-arid lands of Nebraska, spreading flames across hundreds of miles and running the fire districts ragged. Recognizing the threat, Westover



*Federal Surplus Equipment being transported to its new home in Mead*

joined the USFS's Railroad Fire Prevention Committee and received training on ways to prevent these kinds of fires, even walking on the tops of locomotives in Omaha's Union Pacific railyard. Westover informed the Public Service Commission, regulators of the railroads, of the devastation caused by the offending locomotives. He also approached the railroads themselves to show them how they could benefit from the efficiency of improved equipment. Although resistant at first due to the loss of locomotives to maintenance time, the railroads did eventually update their equipment. Instead of 400 or 500 railroad-caused fires per year, Nebraska now suffers less than twenty.<sup>12</sup>

Finally, the FEPP program continued growing its value for the state. Because rent was going up at the Lincoln Air Park, NFS moved the facility to a NARDC superfund site in Mead. NFS threw a big transport party in 2000, which included longtime Fiscal Coordinator Jeanne Andelt behind the wheel of a huge six-by-six military vehicle. As of 2016, over \$80 million in savings for local Nebraska fire districts can be attributed to the efforts of the NFS and the funding provided through FEPP.<sup>13</sup>

## COMMUNITY FORESTRY

Nebraska's connections to community forestry date back to the pioneering research on "city forestry" published in the early 1900s Forest Club Annuals (see Chapter II). Earl Maxwell kept this legacy alive by advocating for a more formalized program. "It occurs to me," Maxwell wrote to Dean Lambert and the College of Agriculture in 1952, "that this [Community Forestry] might be something that would appeal to various groups and provide a means of furthering tree

planting and forestry work in Nebraska ... let's explore the idea some at our next meeting.”<sup>14</sup>

Community Forestry did not come into its own until the 1970s. In 1972 a federal bill amended the Cooperative Forest Management Act (CFMA) to authorize the “Department of Agriculture in cooperation with State Foresters to lend technical assistance to urban areas for the protection, improvement, and establishment of trees.”<sup>15</sup> Buzz Benson predicted that this new urban emphasis would have a big impact on Nebraska, and just before retiring he talked to Dennis Adams and Neal Jennings about getting a program off the ground. Before officially assuming his new role as Regional Community Forester and Fire Planner, Adams was required to obtain a master's degree within two years. His academic advisor, Associate Professor Walter Bagley, helped Adams develop a plan to complete his degree while working at 90% salary. As he was pursuing his degree, Adams started developing the policies, procedures, and promotional materials for the new Community Forestry Program.<sup>16</sup> Although rudimentary compared to today, the program accomplished quite a bit in its first years. By 1977, about 40 communities were receiving assistance and involved to some degree. Eight towns had tree inventories completed and Community Forestry Master Plans were in process. With plenty of help from the county and district agents, Adams was able to assist numerous communities across the state in managing their city-owned tree resources through long-range, systematic planning.

Nebraska Forest Service



*Dennis Adams surrounded by young tree planters at Arbor Day in Beatrice, 1989*

After Adams moved on to other responsibilities in 1977, David Mooter continued to build the program. Mooter established a strong working relationship with the Nebraska Department of Roads (DOR). Through this partnership (and with funding from one of the federal highway bills), the NFS developed a community beautification program. Entrances into towns and cities across the state were enhanced. Mooter was also instrumental in getting the DOR to install state highway entrance signs reading: “Home of Arbor Day.”<sup>17</sup> Eric Berg succeeded Mooter and leads a greatly expanded Community Forestry and Sustainable Landscapes Program which has positively touched urban areas statewide.<sup>18</sup>



## FOREST HEALTH

Prior to a dedicated Forest Health point person, district foresters spent part of their time handling diverse pest problems. Bill Ostrofsky was eventually hired by the Department of Forestry in the mid-1970s to head an Insect and Disease Control program. When Dr. Mark Harrell arrived in 1980, the name changed to Forest Pest Management to reflect what the USFS was focusing on (again, follow the money). “Pests” included insects, diseases and weeds, and “Control” changed to “Management” due to their nuanced meanings. “Control suggested possible eradication,” Harrell explained, “which we typically cannot do. Instead, we manage the threats to low levels.”<sup>19</sup>

One of Harrell’s first tasks to manage was the Zimmerman Pine Moth. This moth would attack pines under the bark, producing enough damage to have branches on the top of a tree break off and decimate young windbreaks. Harrell discovered they were dealing with two species requiring different treatment methods. Due to appropriate chemical treatments, the incidence and severity of this moth was greatly diminished. This is just one example of the way in which the Forest Health program supports all the other efforts of the NFS.<sup>20</sup>

Harrell and his team were also involved in research from 1980 to 2003. Harrell and Dr. Jim Brandle, a researcher and instructor with FFW, conducted and published many research projects together. These included designing publications for landowners such as Extension Circulars and NebGuides. The budget crisis of 2003 eliminated the research aspects of the program, and the NFS now publishes its own Forest Health brochures for the public.<sup>21</sup> However, the new 2004 structure reestablished freedom to pursue research for the NFS staff.



*Nebraska's Forestry, Fisheries, and Wildlife Staff, 1985*

Nebraska Forest Service

## FOREST PRODUCTS UTILIZATION

The timber industry had long been a significant part of forestry in Nebraska, especially in the western Pine Ridge area. In 1955, Nebraska had 285 sawmills, with about a dozen of them cutting lumber commercially.<sup>22</sup> Karl Loerch started a publication entitled Timber Talk in 1961. Still published today by the NFS, it is believed to be the longest continuously printed forest products newsletter in the nation. Timber Talk reaches out to both commercial and amateur loggers in order to share information about possible government assistance. Ralph Monahan served as Nebraska's first forest marketing & utilization (M&U) specialist throughout most of the 1960s. However, by 1971 the position was no longer filled, and Nebraska's forest products industry was left without any guidance.<sup>23</sup>

Out of mostly personal interest, Dennis Adams consistently pushed to have the position refilled. If you do not have marketing and utilization, Adams argued, you have incomplete forest management. He and Mark Shasby would continue publishing Timber Talk, inventory the forests, and occasionally conduct workshops and visit sawmills.<sup>24</sup> Yet the job required a dedicated point person. In 1986, Adams and Community Forester David Mooter urged the NFS to staff a permanent M&U specialist. Adams wrote that this specialist could provide the needed technical assistance for industry to become more efficient and profitable. New products could be developed for the relatively low-value wood resources abundant in the state. Industrial and residential wood energy systems could be investigated as replacements for fossil fuels. More consistent forest inventories would allow better resource planning.<sup>25</sup> Mooter predicted that a M&U specialist could also be an asset to the community forestry program. Uses for woodchips which usually went to the dump could be explored. Maintenance buildings could use energy from urban downed trees and other trimmings. Some communities may even benefit from the purchase or rental of portable sawmills.<sup>26</sup>

Despite all the good reasons to add a M&U specialist, budgetary restrictions delayed the development of the program. In 1989 the NFS did purchase a portable saw mill for demonstration purposes. District and extension foresters moved the "Mighty-Mite" bandsaw around the state, demonstrating the basics of lumber processing, training on the technical aspects of sawmilling, and manufacturing wood products from Nebraska trees. "Because of Nebraska's limited and dispersed timber resource," Dennis Adams announced in a press release, "small portable bandmills offer a viable utilization opportunity."<sup>27</sup> That same year, Adams assisted some innovative students in the UNL Department of Agriculture Engineering designed and built a prototype "tree shear" for the NFS which could be mounted on a typical farm tractor. Farming and ranching lands were being

constantly invaded by eastern redcedar (ERC), and most agricultural-minded Nebraskan's agreed that "trees are weeds if they grow in the wrong place." The Nebraska-made tree shear could cut approximately 60 ERCs per hour. "Nebraska doesn't really have the equipment to harvest trees of this [small] size," said Deputy State Forester Tom Wardle. "Our idea was to make a tree shear which would be accessible to landowners and wouldn't simply be used by corporations. We hope to take the cedar tree, which is a problem for many people, and turn it into a wood product which can be used or sold."<sup>28</sup> The tree shear earned the UNL agriculture students a national award. The NFS was doing its best to assist Nebraskans in optimizing their resources. Still, an official and robust Forest Products program would not be established until the next century.

### FORESTRY FIELD DAYS

The NFS was teeming with new programs and staff members. In an effort to increase its visibility and offer its services to a broader audience, the NFS began holding Forestry Field Days (FFD) in 1978. Demonstrations were designed to educate the public about NFS programs and their application on private property. Horning State Farm at Plattsmouth was chosen for its wealth of demonstration areas and its proximity to population centers. It was also a great place for the tight-knit NFS foresters to come together for a few day to practice their craft. Nearly all of the field staff offered various demonstrations, tours, and educational sessions, including: tree planting and maintenance, pest identification and control, fire control and prevention, watershed protection, forest management, wildlife management, firewood and wood heaters, and Christmas and nut tree growing. Over 250 people braved two rainy and cool September days to observe the talks and demonstrations. "It was apparent that you and your staff did some extremely good planning to make this field day a very enjoyable experience for the general public," wrote the director of the Lower Platte South NRD to State Forester Ferrill. "I am sure that one of the results of the field day will be an increased awareness of our timber resources and the need to propagate, conserve, and manage them. The Horning Farm is truly a showcase for forestry management and experimentation."<sup>29</sup>

The initial success of the FFD continued to grow over the next decade due largely to the enthusiasm of the staff. As Tom Wardle wrote to the retiring Dick Gavit in 1988:

Dick – you're a winner! One day and one night (or more if you want) in beautiful Plattsmouth, Nebraska. Bring the wife and come on down. Think of it ... Plattsmouth in September, foresters everywhere, tall trees and short stories (or is that the other way around?) At any rate, we would love to see you and Lois at Forestry Field Days.<sup>30</sup>



Who could resist such an enticing invitation? It turned out that many could not, as attendance would grow to over 1000 by 1990. Nevertheless, questions concerning the future of the FFDs surfaced by mid-decade. Richard Straight, FFD coordinator, noted that the decision to hold the 1995 demonstrations came more “out of inertia than as a result of a consensus opinion.” Attendance had dropped down to about 400-500 participants drawn from a limited geographical area. Several comments were made “about the efficiency of committing such a large amount of staff time.” Consequently, the decision was made to discontinue FFD in 1996 and commit more resources to other outreach efforts. As Don Westover wrote on his copy of the memo, “FFD RIP.”<sup>31</sup>

### CHANGES AT THE TOP

While the programs of the NFS continued to grow throughout the 1970s, administrative friction led to significant personnel changes. Neal Jennings, who had served as a District and Extension Forester since 1971 and an Assistant State Forester since 1976, had entered into philosophical differences with his immediate supervisor and State Forester, Mitchell Ferrill. Things came to a head in 1979 when Jennings resigned and filed a complaint concerning Dr. Ferrill’s decisions over tenure and overall professional conduct.<sup>32</sup> The immediate result of this friction was that the FFW and the NFS lost an intense, hard-working, and occasionally surly member of its staff. Jennings would move into private business and become a successful timber buyer, forestry consultant, Christmas tree grower, and nursery operator.<sup>33</sup>

Yet Jennings was not quite done offering his input concerning the operations of the NFS. In July 1980, an Agriculture and Natural Resources Committee of the Governor’s Task for Government Improvement was formed “to study the possible separation of the state [forestry] service and the UNL Department.”<sup>34</sup> Jennings testified in favor of the separation during one of the committee’s public hearings. “The primary functions of a university are research and education,” said Jennings, “while the functions of the forest service are land management and service ... to mix functions and activities cuts down on the effectiveness of the forest service ... It’s apples and oranges, although a lot of people would say it’s one and the same.”<sup>35</sup>

Ironically, State Forester Mitchell Ferrill reportedly agreed with Jennings. “State forestry has a state role that is different than the university,” Ferrill explained, and he cited “differences in philosophy and funding sources for the two services, adding that it is unique to Nebraska that the two are under one director.” Ferrill claimed that “disenchantment with the policy of the UNL department encompassing the forest service” prompted his resignation as State Forester and Chairperson of the FFW effective December 31, 1980.<sup>36</sup> But this was far from the whole story.

The Grievance Committee concerning Neal Jennings’s 1979 resignation had identified some

serious faults in Dr. Ferrill's professional conduct. "In view of our findings," the committee concluded, "we cannot see how he can continue as Head. If he does, no member of the Institute will ever feel safe in making an unfavorable evaluation of an administrator and it would be a farce to continue the program."<sup>37</sup> Dr. Ferrill would continue with the university in a teaching and extension role in natural resources policy management.

Despite the input from Ferrill and Jennings, the majority opinion favored keeping the NFS within the university umbrella. "I don't know where you'd go to find more variety of philosophies than the university," Board of Regent member Ed Schwartzkopf testified. "There have been disagreements, but we're making progress." He also noted that the university has "experimental stations and office field labs readily available throughout the state" for disseminating information. "It (keeping the two under university control) is not only more beneficial to all in Nebraska, but also is cost effective." Howard Ottoson, assistant Vice Chancellor of the IANR, concurred by noting the "close relationship between the university's extension work and forestry because state forest workers have an active function and are available for consultation."<sup>38</sup> Although the issue would arise again occasionally in the coming decades, the 1980 committee agreed with the merits of keeping the NFS within the university.

The next leader of the state forestry system would become the longest serving to date and one of the most consequential Nebraska State Foresters in history. Gary Hergenrader grew up on a farm near Gering, Nebraska, and earned his undergraduate degree in general agriculture from UNL. After earning his MA and PhD from the University of Wisconsin, Hergenrader returned to UNL to teach Zoology in 1967.<sup>39</sup> Although he never officially studied forestry, his love of nature began as a young boy, "climbing the trees on the farm the way youngsters will." Tree planting became a habit for him, one that "represents some hope, too, some promise for the future ... It's almost like making a memorial to them [his grandchildren]. Planting a tree is really making a strong statement."<sup>40</sup> After Ferrill's resignation, Dr. Hergenrader was urged to apply. On June 1, 1981, Hergenrader became the Head of FFW and State Forester, relieving Dr. Jim Brandle of his acting role.<sup>41</sup>

## **GROWTH AND CRISIS**

In addition to overseeing the progress and accomplishments of the forestry programs detailed earlier, Dr. Hergenrader led the agency through important administrative changes and budgetary problems. "Department Head and State Forester was a big job," Hergenrader recalled, "but it worked because of the people underneath." As Head he had teaching and research responsibilities, but it turned out that he spent about 70% of his time on the State Forester duties. These duties included maintaining a strong relationship with the USFS and working with the state



*Field trip to northwest Nebraska to look at forest industry opportunities (left to right): Gary Hergenrader, State Forester; Mike Watts, NRD Forester; Bob Kerrey, U.S. Senator and former governor; Tom Wardle, Deputy State Forester; Doak Nickerson, District and Extension Forester, circa 1990s.*

and national legislatures.<sup>42</sup> “You get out and get involved in all the trials and tribulations of life,” Hergenrader said about his new job. “Budget cuts at the university, for example; headlines in a newspaper you’d rather not see.”<sup>43</sup>

The NFS’s first significant budget crisis during Hergenrader’s tenure came in 1986. Jeanne Andelt, who joined the FFW when it was established in 1977, noted that funding was always a balancing act between the federal and state governments. State funding was usually consistent, but federal money could fluctuate significantly based on the economy and political climate.<sup>44</sup> In 1986, President Reagan cut all financial assistance for forestry to the states, and the FFW and NFS were facing a projected deficit in FY 1987 of about \$320,000.<sup>45</sup> In a report requested by Governor Bob Kerrey over budgetary alternatives, consideration was again given to removing the NFS from the university. However, the report concluded that the least expensive and disruptive option was to leave the service within the University with some administrative modifications. In addition, particular attention was given to the devastating consequences that the elimination of the NFS’s excess equipment program would have for rural volunteer fire departments.<sup>46</sup> On the last day of the legislative session, Governor Kerrey and the Unicameral, in a pattern sustained until 2004, supplied the NFS with additional funding to avoid significant reductions in services.<sup>47</sup>

One of the suggested administrative changes from 1986 was adopted a decade later. On

August 1, 1997, the NFS became a separate unit within the IANR, essentially becoming the state's forestry agency positioned within the university. FFW, minus the first "F", was combined with several other departments to form the School of Natural Resources, taking with it the teaching and research duties.<sup>48</sup> Hergenrader and his team were now free to concentrate on the services and action programs which had grown significantly in size and importance, yet still benefit from the vital public communication networks of the university system. By 2003, the NFS could look back on a century of hard earned accomplishments and vanquished obstacles.

CHAPTER SEVEN  
**CRISIS AND GROWTH**  
*(2003 - Present)*

From the truth-is-stranger-than-fiction file comes the story of Nebraska's budget woes and one proposal by the University of Nebraska to help it meet a state mandate to cut \$41 million from its budget:  
Eliminate the state Forest Service.<sup>1</sup>

*-American Forests Magazine, March 1, 2003*

In the vast world of ill-advised political proposals, this one seemed too implausible for fiction. Eliminating the NFS could save the university \$837,000, yet also lead to the forfeiture of \$1.6 million in federal funds for Forest Service programs. More than 360 fire trucks on loan to rural volunteer fire departments would be recalled. Rural woodlots and urban landscapes would deteriorate. A century of advancements in tree distribution, health research, and forest production would be uprooted. On March 13, 2003, the entire NFS staff outside of the State Forester (a position protected by state law) and William Lovett (a Tree Distribution Manager with tenure at the University) was put on notice. "Your appointment with the IANR at the University of Nebraska-Lincoln is being terminated due to budget cuts and the proposed elimination of State funding for the Nebraska Forest Service," read the hand delivered letter. "Thank you for your years of service to the Nebraska Forest Service and the University of Nebraska." The Tree Planter's State and the Home of Arbor Day was indeed preparing to turn its back on its unique legacy.

Realizing the existential threat to the NFS's vital services, Hergenrader received assistance in lobbying the Unicameral from the Nebraska Volunteer Firefighters Association, an organization

which represented over 14,000 rural firemen. While Hergenrader worked with State Senator Roger Wehrbein, Chairperson of the Appropriations Committee, the Firefighters Association's lobbyist, Jerry Stillmock, visited Kathy Tenopir, Senator Wehrbein's staffer and budget coordinator. Many other interested parties travelled across their wide state to enter—some of the very first time—the halls of their state legislature. They testified in hearings, signed petitions, and personally contacted state senators. Due largely to these efforts, the Appropriations Committee learned of the devastating effects the proposed elimination would cause across the state. The Legislature decided to appropriate enough funds for the biennium to keep the NFS operating while it conducted an interim study “to determine where administratively in state government the Nebraska Forest Service should be located and establish permanent funding ...”

Finally, in 2004, the NFS reached a milestone which would ensure its stability and longevity. The Unicameral codified into state law, and added budgetary earmarks for, four core NFS programs: Rural Fire Protection, Rural Forestry, Community Forestry and Sustainable Landscapes, and Forest Health. “The Nebraska Forest Service was always a convenient target for university budget cuts,” recalled Hergenrader, “as it is a service entity with no teaching and little research.” With these important earmarks, however, the university could no longer cut the NFS budget without concurrence from the Legislature. The NFS was now well positioned for future challenges and responsibilities. Like a Nebraska Cottonwood, the NFS would grow exceptionally fast throughout the next decade.

## NFS IN THE NEW MILLENNIUM

Hergenrader retired in early 2005 after leading the organization through its last and perhaps greatest crisis. Dr. Scott Josiah, the Nebraska State Extension Forester since 1998, was one of the principle candidates to become the next State Forester and Director of the NFS. Josiah earned degrees in forestry and ecological restoration and a Ph.D. in forest policy and administration from the University of Minnesota. His broad range of experiences included forest management in New York, wildland fire protection in Guam, managing tree production nurseries for agroforestry projects in Haiti, and directing research and education programs in specialty woody crops production and marketing, community forestry, and agroforestry with Nebraska Extension. Josiah was selected to replace Hergenrader as of February 1, 2005.



Nebraska Forest Service

*Dr. Scott Josiah assumes leadership  
in the new millenium*





*Fire devastates the Pine Ridge, 2012*

To better inform the University and the Unicameral of the accomplishments of NFS programs and activities, and to reduce the chances of the service being a convenient budgetary target, one of Josiah's initiatives was to begin publishing annual reports. This was a prescient decision, as the pages of these reports would document a period when the NFS changed from a behind-the-scenes organization to one that visibly engages with the public and collaborates with numerous programs and citizens across Nebraska.

Josiah and the NFS soon faced challenges in the new millennium that would devastate sections of Nebraska in a manner reminiscent of the harrowing days of the Dust Bowl. The increasing frequency and severity of droughts—combined with a growing amount of forest fuel—led to enormous wildfires burning large areas of the Pine Ridge forests in 2006. During a particularly deep drought in 2012, huge fires burned with off-the-charts intensity, costing the state and landowners tens of millions of dollars. These repeatedly catastrophic wildfires reduced the Pine Ridge from 250,000 acres of forest in 1994 to 90,000 acres by the end of 2012. Another severe fire season would put at risk the very survival of the remaining pine forest ecosystem in the Pine Ridge.



*Single Engine Air Tanker (SEAT) readies for an aerial assault on a fire in 2015*

Armed with this alarming information, Josiah and



Nebraska Forest Service

*Pine Ridge, Roberts Track, 2013*

Jerry Stillmock of the Nebraska Volunteer Firefighters Association worked closely with Senator Al Davis and lobbied the Legislature for increased funding. The Wildfire Control Act of 2013 was a game changer. It enhanced NFS training of rural firefighters and the surplus property program, expanded the forest fuels reduction programs, and added serious aerial suppression support via a SEAT (Single Engine Air Tanker) to the state's suppression capacity. The following year, legislation was enacted for Nebraska to join the Great Plains Interstate Fire Compact, enabling the rapid sharing of firefighting assets between participating states.

Community Forest efforts received a significant boost when the Nebraska Statewide Arboretum (NSA) merged with the NFS in 2009. Keeping with the populist tradition of Nebraska, the NSA is a unique arboretum organization comprised of over 100 affiliated sites which represent the character of the particular geography and respond to the needs of their local residents. As purposefully designed in 1978 by its originator, J.O. Young, the various arboretums span the entire length and width of a state. "Nebraska is a true transition state in terms of climate and geology," explained Young, "and therefore it needed a transition arboretum." The addition of the NSA tripled the agency's capacity and allowed the NFS to provide turnkey community forestry and sustainable landscape services to communities around the state.

The NFS also acquired several new properties in the 2000s that are forming the core of an emerging state forest reserve system. The Timmas Farm Forest Ecological Reserve was donated to the university in 2009 and placed under NFS management. The reserve included 120 acres of natu-

ral forest land adjacent to the Missouri River and was used for ecological research. In 2013 the NFS partnered with the USFS Forest Legacy Program, the Nebraska Game and Parks Commission, and the Nebraska Environmental Trust to purchase the 400-acre Chat Canyon Forestry and Wildlife Management Area along the Niobrara River, thereby protecting this beautiful land from subdivision and development. The NFS also transformed the 640-acre Cedar Canyon State Demonstration Forest and converted the Horning Farm property into forestry and fire education facilities. And as of January 2016, at the request of IANR, the NFS took over management of Prairie Pines, a 160-acre forested property donated to the university in 1992 for purposes of education and research. Purchased in 1959 by Forestry Professor Walt Bagley and his wife Virginia, the property has been used for many purposes, such as windbreak and soil erosion experiments, Christmas tree plantings, and provenance and wildlife research.

The NFS also faced new challenges on the Forest Health front. In 2009, the service began to proactively prepare for an emerald ash borer (EAB) infestation by inventorying rural and urban forests and creating a basis for future action. But the borer struck first. Laurie Stepanek, Forest Health Assistant, presented an EAB to Josiah in 2010 which she said had been caught in one of their survey traps. “Oh, we’re not ready for this!” Josiah exclaimed. He quickly calmed down after Laurie revealed that she had painted a similar-looking beetle metallic green. (You have to make your own fun in Forest Health, even if it means “bugging” the State Forester). However, by 2015 the real borer had been found in Colorado, Kansas, and Iowa, and its spread to Nebraska was imminent. 44 million ash trees were at risk, of which 1 million were in cities and towns. The Unicameral considered a bill in 2015 and 2016 to provide cost-share funding for communities to begin the removal and replacement of ash trees statewide, yet the legislature did not act. In early June 2016, the first confirmed EAB was reported in southeast Omaha. Despite not receiving additional support from the state government, the NFS was prepared to confront the invasion. The NFS immediately released detailed instructions on treatment protocols and removal, disposal, and replacement guidelines. An estimated \$961 million will eventually be spent statewide to respond to EAB and to rebuild community and homeowner tree canopies. In the years ahead, the agency wants to encourage decision makers across the state to double down on legislation that focuses recovery efforts on replanting a diverse range of tree species. Better summed up by Josiah during a 2017 legislating hearing, “the next big tree pest or disease outbreak is not a matter of if, but rather a matter of when.”

In 2007, the NFS began the transformation into an entrepreneurial organization, eventually raising nearly \$35 million between 2007 and 2016 from the US Forest Service and other competitive grant programs. Combining state and federal funds, the NFS launched large-scale forest fuel reduction programs in coniferous forests, treating thousands of overgrown acres. These activities,





Nebraska Forest Service

*State Forester Josiah inspires the next generation of tree planters*

and the enormous quantities of wood they generated, ultimately led to the long-desired establishment of a forest products utilization program in 2011. The program fosters market-driven solutions to forest conservation and management issues. Among the various achievements of the program by 2015 were the conversions of the NCTA Curtis Campus and several other facilities to wood energy. The NFS was also one of four founding members of the National Hazelnut Research Consortium (along the Arbor Day Foundation and Rutgers and Oregon State Universities), with the goal of commercializing the hybrid hazelnut.

Another development during the new millennia can be traced back to the very beginnings of what would evolve into the NFS. The faculty and students of the 1902-1915 Forestry Department pioneered and published research in the emerging field of “city” forestry. Exactly a century later, the University of Nebraska, with help from the NFS and USFS, honored and built upon that legacy of education and innovation by initiating the establishment a full four-year Urban and Community Forestry (UCF) undergraduate major. Nebraska University of the early-twentieth century had been one of just handful of leading institutions in forestry education. UNL of the early-twentieth-first century joined only a few other universities in the US with an actual major in UCF. The degree is a joint endeavor between the School of Natural Resources and the Department of Agronomy and Horticulture, with the NFS and other parties providing students with connections to industry and paid internships.

## MONUMENTS FOR THE CENTURIES

As State Forester Josiah explains, the challenges of our new century have led to explosive growth:

I think it is clear that during the last ten years Nebraska's tree and forest resources have faced mounting and unprecedented threats from climate change, flooding, wildfire, and invasive insects. In this very short period of time, the NFS has had to adjust to this new normal, and has done so by trying to anticipate inevitable change and proactively prepare for it, doubling the number of employees, tripling its budgets, capitalizing on crises, actively and aggressively partnering with other organizations and legislators, and becoming an entrepreneurial organization.

The foresters who preceeded the NFS – Miller, Phillips, Maxwell, Loerch, etc. - could not have predicted what would develop from their decades of tireless efforts, yet the fruits of their labors are seen throughout the state. To honor the 150th anniversary of Nebraska's statehood in 2017, the NFS and the Arbor Day Foundation, in partnership with Susanne Shore, the First Lady of Nebraska, are leading an effort to plant a large number of trees statewide, showing how Nebraska continues to embrace its tree planting legacy. Indeed, it remains a large part of how the state defines itself. In the words of Charles Bessey, an originator and the spiritual father of Nebraska state forestry:

He who plants a tree, thereby links his life to the centuries to come.  
When we who plant are dead, the living cells of the tree perennially build a larger and higher monument to our memory. To be remembered by the silent calls which every Springtime weave new garments of green, is better than to have one's deeds graven in mouldering stone, or written in fading letters.

The letters of this written history will fade, but the deeds of a century of Nebraska state forestry



Nebraska Forest Service

*The dedicated staff of your Nebraska Forest Service, 2016 (fom left to right):*

**1st row:** Jennifer Morris, Rachel Allison, Jeanne Andelt, Heather Nobert, Christina Hoyt, Scott Josiah, Amy Seiler, Emily Levine **2nd row:** Kate Erikson, Jerry Schluckebier **3rd row:** Jen Corman, Sandy Benson, Scott Dewald, Steve Karloff, Laurie Stepanek, Lola Young **4th row:** Adam Smith, Kris Scanlon, Jessica Kelling, Lori Allen, Graham Herbst, Jay Seaton **5th row:** Allie Schiltmeyer, Doug Beck, Dustin Penner, Steve Rasmussen, John Erixson, Rich Wollen, Aaron Clare, Darla Huff **6th row:** Karma Larsen, Eric Berg, Mark Harrell, Justin Nickless, Doak Nickerson, Randy Markwardt **7th row:** Seth Peterson, Casey McCoy, Joe Stansberry, Kendall Weyers, Fred McCartney, Jim Nelson, Kyle Martens, Lew Seiber)

are seen today in the “garments of green” which traverse the landscape, break howling winds, fuel the timber industry, and beautify towns and cities. In the same way, the dedicated staff of today’s NFS can be certain that their work will grow into monuments for the centuries to come.



# ACKNOWLEDGEMENTS

Thanks first must go to State Forester Scott Josiah for his recognition of the importance of the preservation of institution memory and identity. Nebraska state forestry activity has a unique and distinguished past, yet its varied accomplishments had never been narrated nor properly appreciated. Many others graciously gave of their time through interviews, correspondence, pictures and tours, including Gary Hergenrader, Dennis Adams, Don Westover, Mark Harrell, Jeanne Andelt, and, in one of his last interviews before passing away in 2016, Walter Bagley. These contacts added personal and often amusing details to what could have been a much less colorful story. Sean Scanlon, history graduate school colleague and friend, offered his time and expertise to provide detailed feedback with a singularly sardonic editorial wit. UNL Archives and Special Collections Manager Joshua Caster was of great help in piecing together the early history of the Nebraska Forestry Department and in finding rarely seen forestry photographs. Kyle Martens brought his expertise (and patience) to usher this project to fruition. Finally, Lola Young consistently supported the progress of this project as the nerve center of the NFS and lightened the day with her excellent sense of humor (which means she laughed at my jokes.) Many others contributed in this work, and it has been a great pleasure working with you all. To steal a line from Dennis Adams' e-mail, May the Forest be with You!

# TIMELINE

- 1902 – Dismal River Forest Reserve, Niobrara Reserve, and the first USDA Forest Service nursery in the nation founded through the leadership of Professor Charles E. Bessey and proclaimed by President Theodore Roosevelt
- 1903 – Nebraska University Forestry Department formed, offering a four-year Forestry Bachelor of Science degree
- 1903 – 1907 – Frank Miller, Head of Department of Forestry
- 1907 – 1911 – Frank Phillips, Head of Department of Forestry
- 1911 – 1912 – O.L. Sponsler, Head of Department of Forestry
- 1913 – Nebraska Forestation Commission created – no forestry work performed except the publication of two biennial reports
- 1912 – 1915 – W.J. Morrill, Head of Department of Forestry
- 1915 – Nebraska University Forestry Department abolished due to increased academic competition from other schools, the agricultural focus of the state, university budget cuts, and the passing of Charles Bessey
- 1916-1924 – Forestry duties consolidated under the University Extension Horticulturist
- 1920-1921 – University offers first farm forestry courses since 1915
- 1921 – Conservation and Survey Division created – duties included surveying and describing Nebraska forest resources
- 1921 – Conservation and Survey Division given authority to appoint one of its members State Forester – Raymond J. Pool first nominal State Forester, but with no budget or state mandate
- 1924 – Clarke-McNary Act signed into federal law
- 1926 – Nebraska complies with Section 4 of Clarke-McNary Act, tree distribution begins
- 1926-1935 and 1936-1940 – Clayton W. Watkins, State Extension Forester
- 1929-1967 - Game, Forestation, and Parks Commission – no forestry work performed except the publication of “Outdoor Nebraska” and bi-annual reports
- 1935-1936 and 1940-1953 – Earl Maxwell, State Extension Forester
- 1935-1942 – Prairie States Forestry Project, National Headquarters in Lincoln, Nebraska - Paul Roberts, Nebraska native and alumni of the Nebraska Forestry Department named National Director – Clayton Watkins, Earl Maxwell, and Myron Jenkins promote and administer state activities
- 1936-1943 – Myron Jenkins, Director of Forestry Survey and Research within the Conservation and Survey Division

1936 – 4-H Forestry Clubs begin to be formed under the leadership of Earl Maxwell

1950 – Horning Farm bequeathed to UNL for “forestry purposes”

1953-1967 – Karl Loerch State Extension Forester

1955 – Walter Bagley begins tree improvement research program

1959 – Forestry added to the Department of Horticulture – renamed the Department of Horticulture and Forestry

1959 – Department of Horticulture and Forestry given management responsibility for Horning Farm and began forestry research there under the direction of Walter Bagley and with funding from UNL and the USDA Forest Service

1960 – Fire Control Program initiated

1967 – State Forester position created and clarified to be within the University with LB 682 – “Forestation” struck from the Game and Parks Commission

1967-1970 – Karl Loerch first official State Forester under LB 682

1970-1974 – Ellsworth Benson State Forester

1974 – J.O. Young Acting State Forester and Chairperson of the Department of Horticulture and Forestry

1974 – Department of Forestry established, separating from the Department of Horticulture and Forestry

1974-1975 – Richard Gavitt Acting State Forester

1975-1977 – Mitchell Ferrill State Forester and Department of Forestry Chairperson

June 25, 1977 – Nebraska Forest Service officially founded by the Board of Regents within the Department of Forestry

July 1, 1977 – Department of Forestry, Fisheries, and Wildlife (FFW) created - NFS a division within it – Department of Forestry abolished

1977-1980 – Mitchell Ferrill State Forester and Chairperson of the FFW

1977-2003 – Dynamic growth in NFS activities, including fire prevention, rural forestry, community forestry, and forestry health

1981-1997 – Gary Hergenrader State Forester and Head of FFW

August 1, 1997 – NFS became a separate unit within the IANR

1997-2005 – Gary Hergenrader State Forester and Director of the NFS

1999 – Horning State Farm management responsibility transferred to NFS

2004 – Four NFS programs codified into state law with budgetary earmarks – Rural Fire Protection, Rural Forestry, Community Forestry and Sustainable Landscapes, and Forest Health

2005 to present – Scott Josiah State Forester and Director of the NFS

2009 – Nebraska Statewide Arboretum (NSA) merged with NFS

2011 – Forest Product Utilization Program established

2012 – Catastrophic Pine Ridge wildfires

2013 – Wildfire Control Act passed by state legislature

2016 – NFS assumes management of Prairie Pines

2016 – Urban and Community Forestry (UCF) major established at UNL – NFS provides students with connections to industry and paid internships

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## **MANUSCRIPT COLLECTIONS**

Nebraska Forest Service Internal Files: categorized according to this publication.

Perhaps forests and trees are not the first images one conjures when thinking about Nebraska. Indeed, an old joke claims the Nebraska State Tree is a wooden football goalpost. Yet Nebraska has a unique forestry history. Pioneers of the mid-nineteenth century moved into what was popularly known as the Great American Desert, and they rolled the dice that this semi-arid land, seemingly incapable of sustaining trees, could somehow grow crops. After winning that gamble, the settlers yearned for the trees they had grown accustomed to in the Eastern United States. They missed the beauty of the wooded areas and the respite of a shade tree. Moreover, they needed windbreaks to slow soil erosion and crop damage. Homesteaders would take advantage of timber claim opportunities and plant trees 40 acres at a time. Nebraska would become the “Tree Planter’s State”. J. Sterling Morton would found Arbor Day. And Nebraskans would toil in their own blood and sweat to create the nation’s largest hand-planted forest reserve.

The most unheralded part of this unique history is the organization of dedicated, hardworking individuals who have directed these and other efforts. Nebraska foresters have distributed trees, built windbreaks, protected forest reserves, conducted original research, contained diseases, fought forest and wildfires, and assisted the forest products industries. Through obstacles both natural and man-made, forestry activities have continued for over 100 years in one form or another. The pioneering foresters of the early-twentieth century could little predict what would evolve from their efforts. This a story of steady determination, daunting undertakings, and great achievements. It is the story of the Nebraska Forest Service.

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