

MOLLY P. ROZUM

It's Weathered Many a Storm

The Enduring Sod House in Northwestern South Dakota

Northwestern South Dakota was one of the last areas settled under the Homestead Act of 1862, which allowed United States citizens and immigrants who declared their intention to become citizens to claim part of the nation's public domain in exchange for a nominal paperwork fee and by making "improvements," such as plowing the land and building a house.¹ Nebraska historian Everett Dick coined the phrase "sod-house frontier" to represent the agricultural development of North America's northern grasslands, an environment mysterious to its first homesteaders.² When settlers in the 1820s approached the prairies of Illinois, they deemed the soil infertile for its lack of trees. Immigrants valued the tallgrass growth for grazing cattle, but they settled at the edge of the prairie and built log homes with timber cut from adjacent woods. Until the 1840s and 1850s and the development of the steel plow, agriculturalists found it easier to clear woodlands for fields than to break through the thick, knotted tangle of prairie-grass roots that extended six feet below the surface and were impervious to the slight iron plows. Even a small garden plot carved out of the grasslands required considerable hand work in "shaving the grass with sharpened hoes" and "digging in . . . seed with chopping axes."³ It was these tough characteristics, however, that made a newly plowed root-bound furrow of sod, spade-cut

1. For a summary of the original Homestead Act of 1862 and the most detailed description of United States land law as it applied to the northern grasslands, see Mary Wilma M. Hargreaves, *Dry Farming in the Northern Great Plains, 1900-1925* (Cambridge, Mass.: Harvard University Press, 1957), pp. 329-82.

2. Dick, *The Sod-House Frontier, 1854-1890: A Social History of the Northern Great Plains from the Creation of Kansas and Nebraska to the Admission of the Dakotas* (New York: D. Appleton-Century, 1937), pp. 2, 112.

3. John Mack Faragher, *Sugar Creek: Life on the Illinois Prairie* (New Haven, Conn.: Yale University Press, 1986), pp. 62-63.

into blocks, a near-perfect building material. Many decades later, in the early 1900s and 1910s, when settlers streamed into northwestern South Dakota, agriculturalists expected grasslands soil to be rich. A combination of necessity and, by then, regional tradition convinced many settlers to construct houses out of never-before-plowed native grasslands.

Generally, earth-building techniques thrived on the wood-poor prairie and plains grasslands from the middle of the nineteenth to the early twentieth centuries. Builders constructed houses of adobe, puddled clay, rammed earth, field stone, limestone, and sandstone, sometimes in accordance with ethnic tradition and soon imitated by neighbors, and other times because such resources made good house-building material in light of a lack of wood and/or the finances to build a substantial frame home.⁴ In northwestern South Dakota, sod houses, or “soddies” as locals affectionately called them, were ubiquitous, challenged only by the equally humble flimsy tarpaper shack.

While Kansas historian James C. Malin once quibbled with Everett Dick, asserting the dominant house type for the settlement frontier to be “the *sawed house*, rather than the sod house,” the soddie reflected and symbolized the unique conditions of the grassland landscape and the homesteaders’ limited choice of building materials in contrast to farther east.⁵ The historic grasslands space and the vernacular folk sod

4. See Molly Patrick Rozum, “‘It’s Weathered a Storm—Many a Wind Storm’: The Sod House in Northwestern South Dakota, 1900 to 1990” (master’s thesis, University of North Carolina at Chapel Hill, 1993) pp. 14–19; Christopher Martin, “Skeleton of Settlement: Ukrainian Folk Building in Western North Dakota,” pp. 86–98, and David Murphy, “Building in Clay on the Central Plains,” pp. 74–86, both in Thomas Carter and Bernard L. Herman, eds., *Perspectives in Vernacular Architecture, III* (Columbia: University of Missouri Press, 1989); Anton H. Richter, “Russian-German Architecture in Southeastern South Dakota,” *Heritage of the Great Plains* 17 (1984): 13–20; and Jon E. Rau, “Czechs in South Dakota,” in *To Build in a New Land: Ethnic Landscapes in North America*, ed. Allen G. Nobel (Baltimore: Johns Hopkins University Press, 1992), pp. 285–306.

5. Malin, *The Grassland of North America: Prolegomena to Its History* (1947; reprint ed., Gloucester, Mass.: Peter Smith, 1967), p. 268. Malin argued that scholars must reject Dick’s “sod house frontier myth” because “there was no frontier line beyond which sod houses prevailed, and the extent to which sod houses were used at any time or place was limited” (p. 268).

architecture to which it gave rise created a regional distinction.⁶ As the French philosopher Gaston Bachelard long ago observed, “All really inhabited space bears the essence of the notion of home.”⁷ On the grasslands, space, sod, and home converged. According to historic preservation specialist Elaine Freed, an “estimated one million sod houses once occupied the plains,” though she also observed that “few survived long.”⁸

The sod houses still standing in northwestern South Dakota at the end of the twentieth century, however, suggest that many settlers (and their descendants) actually lived in these structures much longer than anticipated. Interested in folk architecture, I set out some eighty years after the “homestead rush” of 1907 to 1911 carried most settlers to the area to document extant sod structures.⁹ I expected to find some hummocks of sod in various states of erosion or maybe a few tousled hovels. These I found, along with decaying sod homes that cattle were using as shelters, and still more soddies, which, though deserted, suggested relatively recent occupation. A few descendants of original builders lived in modern ranch homes into which the old family soddie, almost imperceptibly, had been fully incorporated. The sod houses of northwestern South Dakota, both extant structures and those surviving only in memory and photographs, provide windows through which to view the region’s early development and consider the meaning of this classic Great Plains house type for agricultural adaptation to the grasslands environment.

6. Henry Glassie, *Pattern in the Material Folk Culture of the Eastern United States* (Philadelphia: University of Pennsylvania Press, 1968), pp. 33–35.

7. Bachelard, *The Poetics of Space* (1958; new ed., Boston, Mass.: Beacon Press, 1994), p. 5.

8. Freed, *Preserving the Great Plains and Rocky Mountains* (Albuquerque: University of New Mexico Press, 1992), p. 49. See also pp. 20, 50.

9. The author conducted field work for this project during the summers of 1990 and 1991 and organized the materials into a collection called the Northwestern South Dakota Sod House Papers (NSDSHP), in the author’s possession. Unless otherwise noted, all information in this article derives from this collection, which includes the documentation of seventeen sod structures in various states of repair, general fieldwork notes, correspondence, supplementary local materials, and thirty oral history interviews with relatives and friends of those who built sod structures. Materials for each sod structure surveyed are filed by the owner’s last name. This work is supplemented by research in

The three sod houses highlighted here, supported by references to fourteen others documented in the area, shed light on the role sod buildings played in the history of northwestern South Dakota and what these structures have meant to the people who lived there long after the heyday of sod-brick construction. The first example, Collis and Minnie Penor's 1907 sod house, illustrates the classic early style of sod house building associated with locations far "inland" from railroad towns, where freighting manufactured housewares and milled lumber proved prohibitively laborious and expensive. The Penor house is also representative of the ways in which residents modified and adapted their homes over the decades to carry this soddie and the others into the modern era. The Ann M. Carr soddie, also built in 1907, served not only as the abode legally required of land claimants under the Homestead Act but also as a launch pad for the town of Bison. The Carr sod house, situated in the center of Perkins County's seat of government, stands as a symbol of survival through the area's history of drought, economic struggle, and agricultural adaptation. The O. F. and Molly Dragoo sod house dates to 1910, the height of the area's fast-paced and socially exciting homestead rush. The structure's location along a common thoroughfare to a railroad service town underscores the role access to manufactured lumber and finishing materials played in enabling this house to be finely finished, hinting at the reasons why the sod houses of northwestern South Dakota succeeded in remaining stable and occupied for much longer than their builders planned.

Together, the stories of these particular sod houses, told in the context of the area's general sod building tradition, suggest that certain life patterns, such as age, class, individual reasons for homesteading, and, most importantly, distance from railroad towns, all influenced the choice to build with sod. The relatively common continued use of

paperwork filed under the Homestead Act by the original land claimants in Records of the Lemmon Land Office, Records of South Dakota Land Offices, Records of the Bureau of Land Management, Record Group 49, National Archives and Records Administration, Washington, D.C. Copies of these materials are filed with the NSDSHP and are cited here by the claimant's name, serial number/patent number, and NSDSHP file name. Initial conclusions from this research can be found in Rozum, "It's Weathered a Storm—Many a Wind Storm."

settler-era sod houses up to the 1970s and later, which helps to explain why so many structures could be found in various states of repair at the end of the twentieth century, further suggests the long, tough environmental adaptation required of the generations who followed their builders. Living with their parents through the economically difficult 1920s and 1930s, these post-construction generations specialized in sod house maintenance, in effect “building on” to the local and regional history to which sod houses remain important and symbolic. This generation’s physical and narrative work adds much to the body of knowledge concerning sod house construction and cultural meaning.

The rush to present-day Harding and Perkins counties began soon after the main line of the Chicago, Milwaukee, St. Paul & Pacific Railroad reached the town of Lemmon in the extreme northeast corner of Perkins County in October 1907 and, later that year, Hettinger, North Dakota, several miles north of the state boundary. These counties grew out of what had been Butte County, a massive grassland dotted with abrupt hills and isolated small family ranches founded in the long shadow of the open-range cattle industry.¹⁰ The area was once part of the Great Sioux Reservation, established under the Fort Laramie Treaty of 1868 between the United States and the Lakota, or western Sioux, Indians and covering the western half of South Dakota. The reservation was reduced in 1877 following the discovery of gold in the Black Hills and the subsequent Sioux War of 1876, which saw the defeat of Lieutenant Colonel George Armstrong Custer at the Battle of the Little Bighorn. It was reduced further still in 1889 under pressure from incoming settlers and proponents of South Dakota statehood.¹¹ Mandan, Arikara, and Hidatsa peoples also occupied the area historically, build-

10. Herbert S. Schell, *History of South Dakota*, 4th ed., rev. John E. Miller (Pierre: South Dakota State Historical Society Press, 2004), pp. 243, 253; Paula M. Nelson, *After the West Was Won: Homesteaders and Town-Builders in Western South Dakota, 1900–1917* (Iowa City: University of Iowa Press, 1986), pp. 86, 88.

11. For discussion of the creation and gradual reduction of the Great Sioux Reservation, see Jeffrey Ostler, *The Plains Sioux and U.S. Colonialism from Lewis and Clark to Wounded Knee* (Cambridge, U.K.: Cambridge University Press, 2004), pp. 19, 48–51, 62–66, 118, 217–39. The 1980 United States Supreme Court decision in *United States v. Sioux Nation* ruled the seizure of the western portion of the Great Sioux Reservation, including the Black Hills, illegal. Schell, *History of South Dakota*, p. 363.

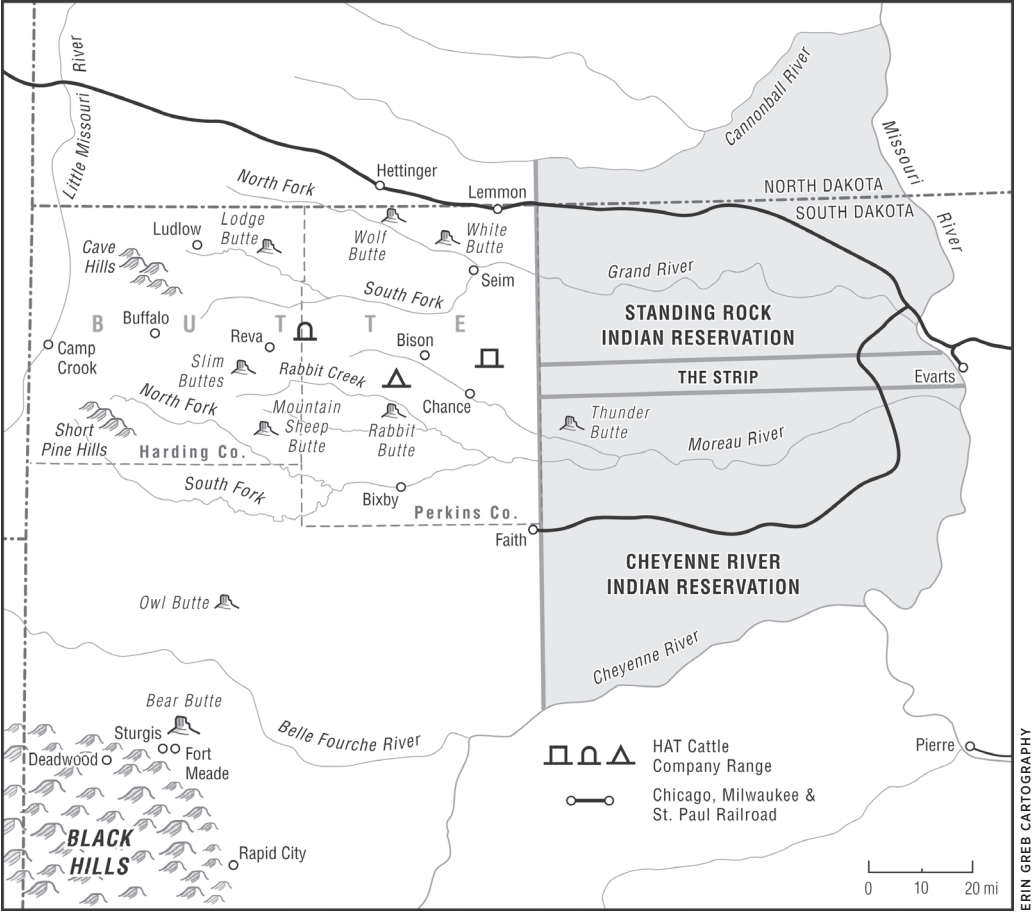
ing semipermanent villages on the Missouri River banks and hunting and traveling throughout the region. The sod houses later constructed by homesteaders echoed the traditional earth-lodge homes of these indigenous villagers.¹² Politically, the two-county space lies entirely within the borders of South Dakota, but socially and culturally, the area spills over into southwestern North Dakota and eastern Montana, where landscape and climate bound together the life experiences of northern plains homesteaders and their descendants.

Short sod grasses dominate the area's semiarid landscape, and large scattered buttes mark the skyline. Western wheatgrass, blue grama, and buffalograss, as well as threadleaf sedge (also called "black root") predominated during settlement. Many in the area, including Aldin Erikson, believed the tough, tight, wiry black roots of threadleaf sedge to be ideal for sod house construction. Big bluestem (also known as "bluejoint" or "turkeyfoot"), a tall grass more common in the eastern prairie, could also be found in the region during the early years of settlement, mainly in wet, low-lying protected areas. Cornelies and Herman Van Den Berg, father and son, considered big bluestem from the draws to be the best grass for sod house construction. The dominance of short grasses is the result of regional weather conditions. Precipitation averages less than sixteen inches annually and fluctuates tremendously from year to year and from one field and pasture to another. The wind blows constant and hard, sometimes at sea-gale velocity, except during clear, below-zero weather when stillness reigns and the very air seems to freeze. Wind tends to wreak havoc with hastily built structures, particularly roofs.¹³

Cottonwood, ash, elm, boxelder, and cedar trees grow throughout the region along tributaries of the Missouri River such as the Little

12. See Roy W. Meyer, *The Village Indians of the Upper Missouri: The Mandans, Hidatsas, and Arikaras* (Lincoln: University of Nebraska Press, 1977).

13. James R. Johnson and Gary E. Larson, *Grassland Plants of South Dakota and the Northern Great Plains*, South Dakota Agricultural Experiment Station Bulletin 566 (Brookings: South Dakota State University, 1999), pp. 18, 22, 26, 46, 80; interview with Aldin and Varna Erickson, Bison, S.Dak., 1 Aug. 1990, Erickson file; interview of Cornelies Van Den Berg, Prairie City, S.Dak., by Frank Shobe, 1979, Van Den Berg file; Schell, *History of South Dakota*, pp. 11–12; Walter Prescott Webb, *The Great Plains* (1931; reprint ed., Lincoln: University of Nebraska Press, 1981), pp. 21–23.



Missouri, Grand, and Moreau rivers and intermittent seasonal streams. Such trees provided sod house builders with log ridge poles, fence posts, and roof beams and poles, while chokecherry, silver buffaloberry, and Juneberry thickets supplied brush for roofing. Settlers also found sources for wood in the pine trees of the Slim Buttes, Short Pine Hills, Cave Hills, and Eagles Nest Butte, all outlier stands related geologically to the Black Hills.¹⁴ As one-time sod house dweller Bob Week ex-

14. Johnson and Larson, *Grassland Plants of South Dakota*, pp. 254, 262; Ike Blasingame, *Dakota Cowboy: My Life in the Old Days* (Lincoln: University of Nebraska Press, 1958), p. 27; Edward Patrick Hogan and Erin Hogan Fouberg, *The Geography of South Dakota* (Sioux Falls, S.Dak.: Center for Western Studies, Augustana College, 1998), p. 23.

plained, “There wasn’t no trees on this prairie, like these shelter belts. . . . It was just grass. . . . Nothin’ here but just prairie.”¹⁵ Space now defined by highway signs and windbreaks (clusters of trees planted to defend homes) have replaced an expanse marked in 1900 only by tall buttes with names such as Twin, Rabbit, White, Wolf, Lodge, Mountain Sheep, Saddle, Owl, Flint Rock, and Thunder. These landforms served as daytime beacons for homesteaders making their way far inland from railroad towns to select 160-acre land claims under the many United States land statutes revising the landmark Homestead Act of 1862.

15. Interview with Bob and Faye Week, Prairie City, S.Dak., 1 July 1990, Week file.



In a time before road signs, buttes and other landmarks served as directional markers for travelers on the open prairie.

Collis and Minnie Penor's Pre-Railroad Soddie

The Penor family arrived in northwestern South Dakota as members of what became known as the "Emerson Bunch," so-named because the five families migrated together from Emerson, Nebraska.¹⁶ Links among the families went back to boyhood friendships in Mapleton, Iowa, and included cowboys who worked in western South Dakota as the cattle industry wound down at the turn of the century in the years before intensive homesteading. Fred Jennewein, for example, had been working as a cook for the HAT ranch in northwestern South Dakota since about 1895. He successfully convinced his sister Theresa ("Tress") and her husband, Albert McKinstry, to join him there in 1902. McKinstry leapfrogged from northwestern Dakota, where he "really liked what he saw," back to Colorado, where he sold his interest in a fruit farm and packed up the family, and then to Sturgis, where he moved Tress and their children until a good sod home could be built.¹⁷

Four years later, the early arrivals from the Iowa contingent convinced the Nebraska families to immigrate. Collis Penor carried with him a folding map of South Dakota acquired from an Emerson real estate firm; although the map advertised farm lands for sale by the Northwestern Land Companies of Saint Paul, Minnesota, particularly in the James River Valley, it also highlighted the buttes, river systems, and range villages of the largely unsurveyed northwestern South Dakota. In September 1906, the five men from Nebraska took the Milwaukee Railroad to Evarts, a cow town near present-day Mobridge in north-central South Dakota. There they crossed the Missouri River by ferry and hired a team and wagon to escort them through "the Strip," a six-mile-wide by eighty-mile-long fenced pathway between the Chey-

16. John Penor, the youngest son of Collis and Minnie Penor, provides most of the details for the Penor family story. Except where otherwise noted, the information in this section comes from my 3 July 1990 interview with him at his home near Bison, South Dakota. Collis S. Penor (1865–1953) was born in Brattleboro, Vermont, to French Canadian immigrant parents. Minnie Duschle Penor (1875–1954) was born in Luverne, Minnesota, to German immigrant parents. Telephone interviews with John Penor, 7, 15 July 1993, Penor file.

17. Telephone interview with Penor, 7 July 1993; telephone interview with Dorothy Haugen, Bison, S.Dak., 6 July 1993, and Dorothy Haugen to author, 6 Aug. 1993, Haugen/McKinstry file. Haugen is Albert McKinstry's granddaughter.

enne River and Standing Rock Indian reservations built by agreement of the Milwaukee Railroad and the Bureau of Indian Affairs. Ranchers used this trail to herd cattle from the open range and leased reservation lands to the railroad siding at Evarts, where the stock traveled on to the Chicago market. The last cattle roundup in the area that would become Perkins County took place in 1906. At the west end of the Strip lay the old HAT ranch rangelands and Jennewein's and McKinstry's places. Jennewein himself had taken over the headquarters of the HAT ranch and worked to make it known for horses.¹⁸

Using the McKinstry ranch as a base for about a month, the men worked to lay a legal foundation for their claims. As Collis and Minnie Penor's youngest son John recounted, the big cattle companies considered people such as McKinstry to be "nesters" who simply "picked out a place and built a ranch" before the land had been officially surveyed. Reportedly, McKinstry had already claimed choice land for the Nebraska families in the area along Thunder Butte Creek. Others besides Jennewein and McKinstry established cattle ranches before they actually filed for the land. Joseph Byers, for example, moved in 1895 to the Black Hills, where he found employment as a cabinetmaker doing finishing work for the hospital at Fort Meade. He and other family members trailed cattle to northwestern South Dakota starting around 1900, although the family did not make homestead entry until 1907. Byers family history holds that the men came first, hauled lumber from the Black Hills to build a shack, and "sodded it up afterwards." Later, the Byers added a long-surviving sod house to the shack.¹⁹ Similarly, William Longwood arrived early and entered a homestead claim in 1902 on land where he grazed his own cattle. Henry Bohnasck purchased the improvements in 1903, including a sod house on land where he ran cattle, before he entered a homestead claim for the property.²⁰

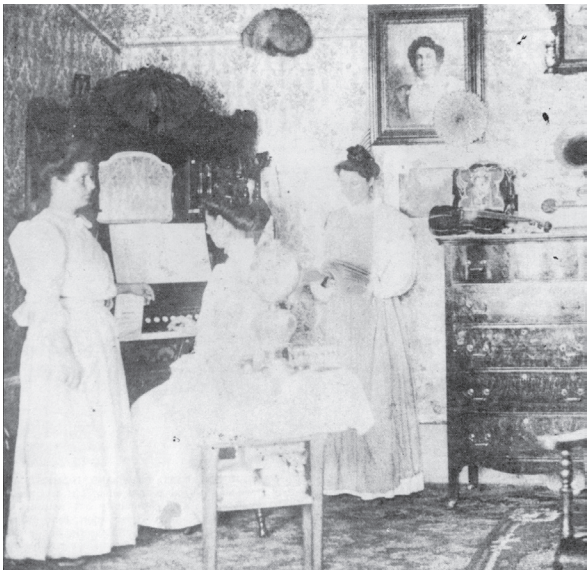
18. Telephone interview with Penor, 7 July 1993; Schell, *History of South Dakota*, pp. 249, 251–52; Blasingame, *Dakota Cowboy*, pp. 7–9; Adria B. Sudlow, ed., *Homestead Years* (Bison, S.Dak.: Bison Courier, 1968), pp. 24, 102, 113, 192. According to Schell, *History of South Dakota*, "The Indians received a toll of twenty-five cents per head for all cattle and horses" driven across the strip (p. 251).

19. Interview with Oliver Green, Lodgepole, S.Dak., 2 July 1990, Byers/Green file. See also Joseph D. Byers, serial 09549/patent 307195, *ibid*.

20. Henry Bohnasck, serial 09013/patent 665119, Nash/Bohnasck file; William D. Longwood, serial 08931/patent 134374, Longwood file.



Mary and Alfred Byers (center) stand with their daughters in front of their sod house in 1908. The original frame shack, an ell with shrunken roof boards and a sod veneer, is at left.



The interior of the Byers sod home, with its organ, framed photographs, and other amenities, could easily be mistaken for any parlor of the period. From left are daughters Ella, Frances, and Alice Byers.

Having seen the land McKinstry selected, the Iowa-Nebraska friends recorded their own claims during the third week in September 1906 with a land locator attached to the Rapid City land office but working out of Seim, a small inland village near the south fork of the Grand River.²¹ Next, the men “borrowed a wagon” and cut timber along Rabbit Creek to “set the corner posts on their land.” Claims made and boundaries marked, the group returned to Nebraska to pack for a permanent move to South Dakota.

In early April 1907, the Emerson Bunch loaded fourteen wagons with homesteading supplies and took the train to Sturgis, located at the foot of the Black Hills. From there, the five families traveled on the Bismarck Trail, a then-obsolete but well-worn freighting path between Deadwood, South Dakota, and Bismarck, North Dakota.²² They trailed on past a big butte, where they turned onto a different wagon road that would pass by their claims before ultimately leading to the HAT Ranch. A rainstorm and the “gumbo” it produced slowed the trip; the clay soil rolled up on the wagon rims, rendering them immobile. It took the caravan two weeks to travel through the mud. Pass by their claims they did, realizing the mistake only upon encountering Albert McKinstry, who had ridden out on horseback to meet the group.²³

Tents went up the first week of May 1907, and the five men retraced their tracks back to Sturgis for supplies left there in storage. The fourteen wagons—almost three per family—had not been enough to hold the goods needed to set up homesteads for five families. Family narrative holds that the women took charge of the homestead tents, milk cows, and extra horses, which turned out to be no simple task since “one of those nice May blizzards hit.” About the time the women ran out of wood to heat their canvas tents, McKinstry and another resident arrived to assist them.

During the first summer, the Emerson men broke enough sod to

21. Telephone interview with Penor, 7 July 1993.

22. The Bismarck Trail began in 1876 to supply the Black Hills gold rush traffic but became obsolete after railroads reached Pierre in 1880 and Chamberlain in 1881. Elywn B. Robinson, *History of North Dakota* (1966; reprint ed., Fargo: North Dakota Institute for Regional Studies, 1995), p. 183.

23. Telephone interview with Penor, 15 July 1993.

plant crops and build four homes. More than a house was required to establish a working farm or ranch, however, so homesteaders constructed many sod outbuildings in addition to their sod homes. By the time Collis Penor applied for final proof on his homestead entry five years later, in addition to a house, he listed a sixteen-by-forty-five-foot barn, a shed, and a chicken house, all built of sod. The proof of claim also listed a nine-by-twenty-six-foot “cave.”²⁴ In addition to sod barns—some of them quite large (sixteen by forty-five feet, fifteen by forty feet, and fourteen by fifty feet)—other northwestern South Dakotans filing proofs of homestead completion listed structures that included sod henhouses, sod blacksmith shops, a sod coal house, a sod hog house, a sod cow shed (sixteen by thirty feet), and sod stables (one twenty by sixty feet, another thirty by sixty feet).²⁵ According to Virgil Worm, who remembered repairing a dilapidated sod operation his father rented in 1929, such construction was “a lot of hard work. Real hard work because them sods are not light. . . . When you got done you really felt like you’d accomplished something. . . . You’d stand back and look at it and you didn’t know how it got there.”²⁶ Oliver Green recalled a sod chicken house he helped his father build: “Laying up any size of house, why there’s a lot of work to it—a lot of work.”²⁷ Bob Week echoed both men, stating that sod construction “didn’t take too much knowledge” beyond studying the layout of other sod houses. “[It] took a lot of work, though.”²⁸

Just where the Emerson families learned the techniques of sod wall building is unknown, but the farmers from Nebraska had probably seen plenty of sod houses or may even have helped to build some there. Recent scholarship suggests that sod house construction methods on

24. Collis S. Penor, serial 09239/patent 314705, Penor file.

25. Tollef O. Bekken, serial 017670/patent 438880, Bekken/Anderson file; Orloff F. Dragoo, serial 029789/patent 567235, Dragoo file; Joseph D. Byers, serial 09549/patent 307195, Byers/Green file; Josef A. Bengts, serial 010868/patent 654829, Josef A. Bengts file; Franz Seidel, serial 09618/patent 407029, Fried/Seidel file; William D. Longwood, serial 08931/patent 134374, Longwood file; Jess Dalton, serial 09098/patent 267281, Myers/Laflin/Dalton file.

26. Interview with Virgil Worm, Prairie City, S.Dak., 3 July 1990, Worm file.

27. Interview with Oliver Green, Lodgepole, S.Dak., 2 July 1990, Byers/Green file.

28. Interview with Bob and Faye Week.

North America's grasslands originated with *terrón*-brick construction in the Southwest—using blocks cut with a spade from grassy river marshland and dried in the sun. The method was carried to Nebraska in the late 1840s, where the military first used it to build parts of Fort Kearny near the Platte River.²⁹ Other scholars associate sod house building with early use by Mormons in 1846 at their Winter Quarters in Nebraska and with early ethnic immigrant building traditions.³⁰

29. David Murphy, senior research architect for the Nebraska State Historical Society, speculates that fur trapper Andrew W. Sublette encountered *terrón* (Spanish for “a flat clod of earth”) brick building in his travels in New Mexico and then carried the concept to Nebraska in 1847 while serving with the United States Army at Fort Kearny during the Mexican-American War. See Jenna Peterson, *The Nebraska Sod House* (Lincoln: Nebraska State Historical Society), e-book, pp. 3, 4, 10–13. See also David Murphy, “Clay Construction,” in *Encyclopedia of the Great Plains*, ed. David J. Wishart (Lincoln: University of Nebraska Press, 2004), pp. 71–72.

30. See Rozum, “It’s Weathered a Storm—Many a Wind Storm,” pp. 24–41, for an overview of sod building origins. See also Roger L. Welsch, *Sod Walls: The Story of the Nebraska Sod House* (Broken Bow, Nebr.: Purcells, 1968), p. 23; Dick, *Sod-House Frontier*, pp. 57–58, 103–5, 185; Richard E. Bennett, *Mormons at the Missouri, 1846–1852: “And Should We Die . . .”* (Norman: University of Oklahoma Press, 1987), pp. 68–90; and Robert W. Frazer, *Forts of the West: Military Forts and Presidios Commonly Called Forts West of the Mississippi to 1878* (Norman: University of Oklahoma Press, 1965), pp. 40, 50–51, 54, 86.



The sod structures on Albert McKinstry's ranch included a four-room house (right), horse barn (left), chicken house and shed (center), and livestock shed (top).

The large log ridge pole dominates the ceiling above the dinner table in this 1923 photograph of the McKinstry sod house. Also visible are the wall coverings of newspaper and other printed material and the wire-hung curtain partition.



In addition, Albert McKinstry had built his northwest South Dakota ranch with sod. Dorothy Haugen, his granddaughter, spent time as a little girl in her grandparents' sod house, which she remembered for the huge log center ridge pole that ran directly above the dining area.³¹ John Penor stated that although his father "wasn't a brick layer, and this was the first sod house he ever built, he must have done a fairly good job anyway. It's still standing."

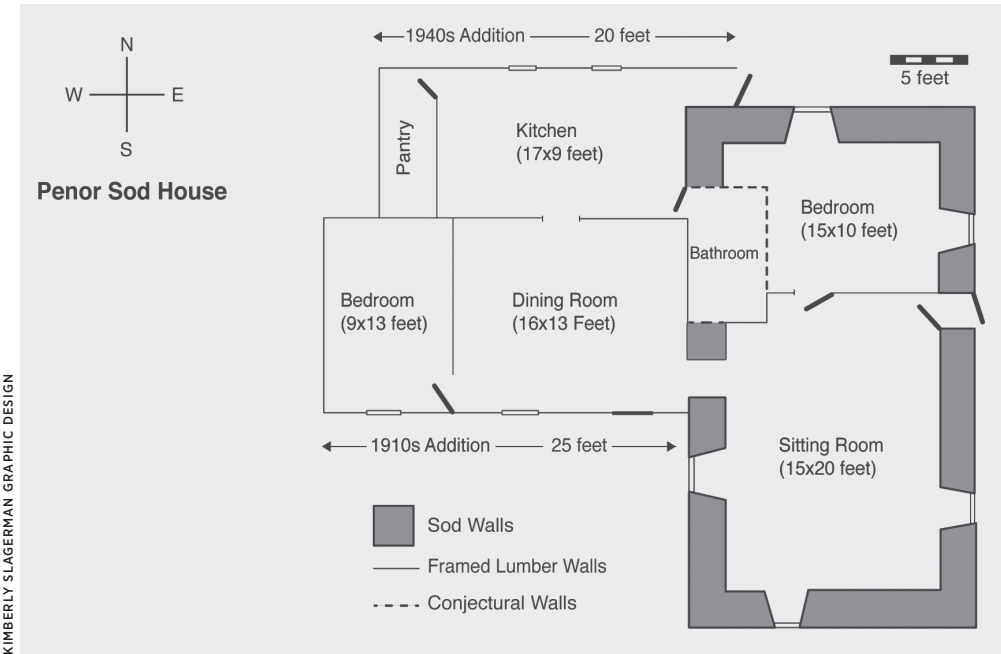
According to Homestead Act records, the Penor family completed its main sod house on 1 October 1907. The original soddie boasted a

31. Interview with Dorothy Haugen, Bison, S.Dak., 2 July 1990, Haugen/McKinstry file.

standard one-story rectangular plan with a low-pitched, side-gabled roof. The interior measured fifteen by thirty feet, but with walls built up of ten-by-thirty-by-three-inch sod blocks laid three bricks wide, the exterior grew to twenty by thirty-five feet. An interior frame partition cut the house into one twenty-by-fifteen-foot combination sitting/dining room on the south and a ten-by-fifteen-foot bedroom on the north. Two coal stoves heated the soddie.³²

Papers filed with United States land offices as part of the proving-up process, in which claimants swore under oath that they had met the requirements of the Homestead Act, frequently specified building measurements as either “inside” or “outside,” reflecting the thickness of sod walls. In filling out the government paperwork, residents also reported their use of lumber in the construction of their sod homes or outbuildings, specifying, for instance, that the sod house had a “lumber floor and roof,” or a “board roof and floor,” or simply a “board roof,” or, in one case, a “board roof soddied.” One claimant placed a “lumber

32. Penor, serial 09239/patent 314705.



roof” on a fifty-foot sod barn, and another mentioned a combination “sod and lumber cow shed” that measured sixty by eighty feet. One homesteader placed a “board roof” on his sod barn as well as on his sod hen and hog houses.³³ Many of these builders used a combination of local timber and pre-cut lumber. A structure with a ridge pole made of a “big old log” covered with boards impressed a young Martin Anderson.³⁴ William Longwood used log beams cut from the south fork of the Grand River when constructing his 1902 sod home. Bob Week recalled one sod house whose builder had cut the long roof beams from large trees in the buttes.³⁵ If homesteaders used milled lumber in their sod building construction, they claimed it as something valuable and distinguishing.

The Penor family ranch operations also, at least by the time Collis Penor made final proof on his homestead, used considerable lumber, not to construct the main residence but on the outbuildings. By the time they proved up on the homestead in 1912, the place had three frame buildings: a fourteen-by-sixteen-foot granary, fourteen-by-sixteen-foot blacksmith shop, and a ten-by-sixteen-foot “engine house.” The ranch also used cedar and ash posts for two miles of fencing.³⁶ Other homesteaders in northwestern South Dakota who built sod houses also listed a *mélange* of frame buildings on proof claim forms: granaries, barns, stables, and sheds for animals, machinery, or buggies.³⁷ One applicant claimed a frame house and a sod barn, and another application listed a sod house with three sod and two frame additions. The owner of the frame house, which measured twelve feet square, used it to prove up on his second land claim in 1919. The same year, he filed for the proof

33. Bekken, serial 017670/patent 438880; Byers, serial 09549/patent 307195; Dalton, serial 09098/patent 267281; Charles Spangler, serial 05023/patent 112547, Eggebo/Spangler file; Dragoo, serial 029789/patent 567235; Longwood, serial 08931/patent 134374.

34. Interview with Martin Anderson, Zeona, S.Dak., 27 July 1990, Bekken/Anderson file.

35. Interview with Judith Longwood, Lemmon, S.Dak., 4 July 1990, Longwood file; interview with Bob and Faye Week.

36. Penor, serial 09239/patent 314705.

37. Dragoo, serial 029789/patent 567235; Seidel, serial 09618/patent 407029; Byers, serial 09549/patent 307195; Dalton, serial 09098/patent 267281; Henry Bohnasck, serial 09013/patent 665119, Nash/Bohnasck file.

application and built a sod house that his daughter, Mary Mackey, lived in her entire life. “It will be sixty-one years,” Mackey explained in 1990. When her parents married, they first moved into her father’s “bachelor quarters” but “built their [sod] house right away.” Tellingly, the frame structure ultimately became Mackey’s granary.³⁸

The original builders of the Penor sod house began from a corner when constructing the walls. The sod bricks, which could weigh fifty pounds or more, were laid all the way around the perimeter, “like dominos,” grass-side down, from the ground up to the gable peaks. “One row [three bricks wide] would be the lengthwise,” explained John Penor, “and then when they put the next row of sod up they crossed it” the other way, as a bricklayer uses the header-stretcher method of rotating short and long ends. The sod layer placed individual bricks half on one, half on the next, to cover the seams of the preceding layer.³⁹ As Billy Myers, who helped to build a couple of houses phrased it, “You don’t want any of your sods all making the same break. It’s just like laying bricks.”⁴⁰ Staggering and rotating blocks and seams bound together the three stacks of sod.

38. Interview with Mary Mackey, Bison, S.Dak., 3 July 1990, Mackey/Englehart file. *See also* John Englehart, serial 033220/patent 759419, *ibid*.

39. John Penor to author, 28 July 1993, Penor file.

40. Dalton, serial 09098/patent 267281.



This view of the south side of the Penor sod house shows the window that shed light into the kitchen and dining area. The sod barn is at right. Collis and Minnie appear at left with Minnie’s sister Gusta Sinkman and her children (in Collis’s arms and at far right). The remaining boys are Penor sons. Three Penor children, including John, were yet to be born in this sod house.

When layering reached “a door frame or a window frame, it was necessary to cut a sod 4 x 10, 6 x 10, or whatever it took to finish the layer to that point,” explained Penor. The sod walls his father built grew narrower with the height of the wall. Some thought thick bases meant increased stability, but Collis Penor built the top portion of his walls only double wide for another reason. “[Dad] told me,” John recalled, “that before he was half done he found it was hard to find sod 30-inches long that would hold together while handling. So he tried 20-inch sod and it worked to his satisfaction. He continued to cut 30-inch sod when he found some that would hold together, but most of the top half was built with 20-inch sod.”⁴¹ Billy Myers remembered that his father brought the walls “up straight on the inside but he brought them up on a slant on the outside, so it was only two feet wide at the top.” This method improved stability by reducing the tendency for the walls to “either rock in or out,” Myers said.⁴²

The original roof of the Penor sod house, which the family quickly replaced, echoed those of the earliest sod houses built in places far inland, such as Nebraska during the 1850s to the 1880s, where main line rail routes and lumber “line yards” had yet to be established. The Union Pacific Railroad did not complete its tracks through Nebraska for the first transcontinental route until 1869, and many years passed before branch lines expanded webs of connections across the grasslands.⁴³ The first Penor house roof, made entirely of local timber, marks the house as pre-railroad style. Homestead records show that other area residents used what they called “pole and sod” roofing, but on outbuildings. One sod house builder in the area constructed a fifteen-by-forty-foot sod barn and a twelve-by-sixteen-foot sod hen house, each covered with a pole and sod roof; another put a hay roof on a sixty-by-eighty-foot lumber shed; and still another placed a dirt-covered pole and hay roof on a sixteen-by-eighteen-foot sod barn.⁴⁴

Freighting expense resulting from what Great Plains scholars have

41. Penor to author, 28 July 1993.

42. Dalton, serial 09098/patent 267281.

43. Dick, *Sod-House Frontier*, pp. 352, 356.

44. Bekken, serial 017670/patent 438880; Dalton, serial 09098/patent 267281; Spangler, serial 05023/patent 112547.

called the “social cost of space,” rather than simple supply shortages, constrained grasslands building choices. The relative lack of trees limited local wood for building, while social distance limited the use of commercial lumber. In areas newly opened for homesteading, many settlers faced this timing dilemma. Early arrivals could obtain their choice of land claims, but a combination of financial means and distance constrained their building choices. Settlers expected both factors to be temporary, lasting only until abundant crops and cattle weights could be harvested and sold or until railroad extensions reached inland towns. Both factors eased the costs of building.⁴⁵

The sod walls bore the full weight of the pre-railroad-styled roof on the Penor soddie. Most likely, according to John, the builders had to use two logs that met on a center post to create the main ridge pole at the peak of the roof “because you couldn’t get a tree that long.” Based on historic knowledge of tree growth in the area, each log would have been about twelve inches in diameter. Together they served as the main roof support, but at least two supporting beams ran parallel to the ridge pole on each side. The Penor roof boasted local ash posts laid from the wall to the ridge log, “just right close together, side by side. . . two or three inches apart,” according to family history. “On top of that was a layer of hay, and on top of that was gumbo,” about six inches, John recalled. The sticky mud, possibly containing bentonite, a local mineral named after Fort Benton, Montana, helped seal the roof from water. John believed that burlap sacks may have lain between the hay and the ash posts.⁴⁶ Other builders mentioned covering the sod on their roofs with “a little gumbo or hardpan on top to fill the crack between them sods.” According to Herman Van Den Berg, the white alkali hardpan helped “seal it from water. . . . Those hardpan spots [last] forever.

45. Paula M. Nelson, *The Prairie Winnows Out Its Own: The West River Country of South Dakota in the Years of Depression and Dust* (Iowa City: University of Iowa Press, 1996), pp. 92–115.

46. Telephone interview with John Penor, Bison, S.Dak., 19 July 1993, Penor file. Formed from volcanic ash, bentonite is unique for its high rate of water absorption. Also known as sodium bentonite, the substance “can swell up to 16 times its original size and absorb up to 10 times its weight in water” (Wayne M. Sutherland, “Wyoming Bentonite: Summary Report,” *Wyoming State Geological Survey* [Sept. 2014], p. 3, www.wsgs.uwyo.edu).

It never soaks away.”⁴⁷ Though the Penor house roof was side-gabled, its low pitch unfortunately ensured water retention, especially after a three-day rain. Collis and Minnie replaced the sod roof before John’s time, but he remembered stories of rain soaking into the house as the one and only thing about which his mother complained, even long after they replaced the roof.

The only manufactured building materials used in the construction of the original Penor sod house was milled lumber for fenestration, or door and window openings. As they layered sod up for the walls, builders set in window and door frames close to the outside wall. Setting the frames almost flush with the wall exterior created shelf-like window sills inside, the telltale sign of sod house construction. Many who experienced or visited sod homes recalled the luxurious plants that often sat on such sills. Children, especially, enjoyed these deep-set windows. Gladys Jackson, who lived in a sod house for the first eighteen years of her life, “used to sit in them when I was a little kid.”⁴⁸ Mary Mackey recalled hiding in the window sills and irritating her mother by knocking over the flowerpots.⁴⁹ Lois Eggebo, who grew up in her grandmother’s sod house, also recalled playing in the wide window sills. “Grandma used to have plants in one of those and the one by our bed us kids used to have some of our toys and stuff in,” she remembered.⁵⁰ Gertie Van Den Berg appreciated the deep, wide window ledges where “we could have flowers and plants without [them] freezing.”⁵¹

Often, as in the Penor house, builders beveled the sod walls around the windows from the outside to the inside to allow more light to enter the structure. At least three four-pane sash, double-hung windows occupied the casings placed in the Penor house walls at about the two-foot level—one window in each of the north, south, and west walls. To increase the interior light, builders divided another two-pane

47. Interview with Herman and Ruby Van Den Berg, Prairie City, S.Dak., 25 May 1991, Van Den Berg file.

48. Interview with Gladys Jackson, Bison, S.Dak., 2 July 1990, Jackson/O’Rourke file.

49. Interview with Mackey.

50. Interview with Lois Eggebo, Prairie City, S.Dak., 2 July 1990, Eggebo/Spangler file.

51. Gertie Van Den Berg, “Memories of Sod House Days in [19]13–1914,” Van Den Berg file.



The mud-walled soddie served as a backdrop for this birthday photograph, taken sometime after the early 1930s.

window and placed each one at the four-foot level on either side of the door in the east wall. In addition to a window, the west wall also contained a central door.

Window and door frames were typically placed in the walls as the houses rose, but Johnny Allendorf, who watched the sod building process in about 1923 when he was five years old, said the builders of his family's home "cut the doors and windows out afterwards" with "sharp, wide spades." When stacking the bricks, they had inserted the wooden lintel plates required to stabilize the walls on either side of each window so that it could be cut into the wall later. The practice allowed an owner to add windows over time.⁵² Similarly, Bob Week suggested, an owner might remove a window and replace it, trimming the sod to fit, with a bigger, better window that let in more light.⁵³

The first finishing of the Penor house consisted of covering the inside walls with a layer of homemade plaster, a mixture of local sand mined

52. Interview with John Allendorf, Prairie City, S.Dak., 21 May 1991, Allendorf file.

53. Interview with Bob and Faye Week.

from a pit about five or six miles away, and bentonite that helped give the plaster its sticking power. The walls remained covered in a grayish sand plaster for decades, except for a brief six-month period after Minnie papered the walls. The wallpaper soon started falling off and she had it all removed, deciding that dull-colored plaster trumped lumpy papered walls that peeled. A canvas floor and a ceiling of big burlap gunny sacks completed the early soddie. The main improvement in the early years was a wood floor, installed as soon as lumber became available, and, eventually, a plasterboard ceiling. A new low-pitched hip roof made of lumber followed within a couple of years. After the Penors let the walls settle for a period of time, the exterior received a sheathing of burlap and gumbo secured with vertical lumber planks. Stuccoing the exterior in the early 1930s gave the sod house a new, solid mud wall look.⁵⁴

About 1911, the Penors purchased a frame, clapboard-covered house that a discouraged homesteader wanted to leave behind. The soddie practically doubled in size with the two-room, medium-pitched gable house the family attached perpendicular to the west side, transforming the rectangular plan into a T-plan house. The Penors subsequently shuffled the use of interior space, moving the kitchen/dining room function from the main room of the sod house to the sixteen-by-thirteen-foot frame room immediately west and using the largest sod room solely for “sitting.” The second new room, measuring nine by thirteen feet became the boys’ bedroom; by then the Penors had five sons. When by 1915, the family had increased by two daughters, Collis and Minnie partitioned their bedroom in the sod house to make a separate room for the girls. By then, the floors boasted wall-to-wall linoleum.⁵⁵

In the 1940s, a series of structural and decorative changes began that eventually updated the house for modern conveniences. Since a combination of precipitation and bird-pecked holes had begun to erode the exterior sod walls, the Penors added a protective lumber frame covered with a veneer of brick-patterned composition sheeting, which they purchased in rolls, tacked down in horizontal layers,

54. Telephone interview with Penor, 19 July 1993; Penor to author, 28 July 1993.

55. Telephone interviews with Penor, 7, 19 July 1993.



The Penor family gathered in the main room of their sod home on Christmas Day in 1938. John is at far left, and Collis and Minnie are seated at the head of the table.

and secured with vertical corner planks. Around 1945, John built a nine-by-twenty-seven-foot lean-to addition from milled lumber; it filled in the northwest corner of the T-plan house. The addition also signaled the start of running-water facilities, as it created modern kitchen, pantry, and bathroom spaces. The bathroom lapped into the sod structure and reduced the size of the girls' bedroom. A battery-operated wind-charger electrical system, in use from about 1933, became obsolete with the advent of Rural Electrification Administration (REA) wiring around 1949. At some point, a gas stove replaced the coal stove in the dining room. John Penor remodeled the interior walls of the sitting room around 1955, covering the gray sand-plastered walls with paneling because, among other reasons, pictures would not hang straight on the tapered sod walls. Asphalt shingles unified the look of the now-complex hip, gable, and shed roofs of the house.⁵⁶

Many sod homes received electricity, running water, plumbing facilities, telephones, and other modern updates from the 1940s through

56. Telephone interview with Penor, 19 July 1993.

the 1970s as they became available and affordable. Juanita Lenerville grew up in a sod house built in 1930, soon after she was born. The Lenerville sod house had a battery-powered light plant by the late 1940s but benefited from the REA wiring for electricity in the 1950s. Plumbing and running water came to the house in the 1970s, when Juanita and her brother added a modern kitchen. As she explained it, the “sod was removed from the wall after we built the framework for the kitchen.”⁵⁷ Such changes modernized sod homes, making them quite comfortable throughout the twentieth century.

The Penor sod house remained a part of a modern adapted farming-ranching operation. During the first years of the homestead, the agricultural activities outside the sod house centered in part on row cropping, a requirement of the Homestead Act. In their agricultural pursuits, Collis and Minnie Penor started out as beginners, basically

57. Interview with Juanita Lenerville, Lodgepole, S.Dak., 30 July 1990, Lenerville file.



This 1990 view of the northeast side of the Penor sod house shows the two-room frame house added on in 1911 and the shed-roofed kitchen addition built in the 1940s.

“city folks,” according to their son. Prior to the Dakota farm claim, John’s father worked as a jeweler in Emerson. The Nebraska connection proved key to the Penors’ success, as the other families from Emerson had backgrounds in farming. Albert McKinstry and Fred Jennewein also had many years of actual experience with the land and climate of northwestern South Dakota that the newcomers could draw on.⁵⁸

As a practical matter, Collis Penor resurrected the blacksmithing skills he had learned during boyhood. The supplies his wagon carried for the initial claim venture included “a forge and all the equipment that was necessary to sharpen the plow blades and set wagon tires,” John recalled. “He was quite a blacksmith along with everything else.” Given his skills, Collis likely maintained the plow blades that cut the sod for the houses of the Emerson Bunch—a daily task important for neat-cutting a plowed sod furrow.⁵⁹ “Everything else” included a mail route in the early years and service as clerk of courts for Perkins County. Minnie Penor kept the garden and helped with the milk cows. She also cooked for her husband’s blacksmithing customers and, after the town of Bison grew, frequently boarded the local population on court days. In later years, town dwellers often remembered Collis Penor for his winter trips to town in a red cutter sled pulled by Prince, a favored horse. Collis delivered fresh eggs to Bison residents daily. John acknowledges, however, that although his father “tried to be a farmer, . . . he wasn’t a farmer.”⁶⁰

Collis and Minnie Penor nevertheless succeeded well enough to secure a land base and mixed-economy ranch that adapted and lasted. The six years recorded on the Penors’ final-proof testimony provide insight into the quality of the growing seasons of the period. Successful farms during the homestead era peaked in 1909, when the Penor family had thirty-five acres in crops. That year, fifteen acres planted to corn produced 500 bushels; eight acres of oats, 320 bushels; three acres of potatoes, 400 bushels; three acres of barley, 88 bushels; and one acre of wheat, 25 bushels. Three acres of alfalfa and produce from Minnie’s one-acre garden rounded out the crops for 1909. In 1910, production

58. Sudlow, ed., *Homestead Years*, p. 191.

59. Interview of Cornelies Van Den Berg.

60. Interview with Penor, 3 July 1990. See also Sudlow, ed., *Homestead Years*, p. 234.

declined, and, as it turned out, the year marked the beginning of a dry period that hit harder in 1911 and lasted in some localities through 1912.⁶¹

The experiences of other area settlers mirrored the Penors' patterns of crop growth and experimentation. Owners broke between ten and forty acres, as revealed on homestead records for surviving sod houses in northwestern South Dakota. Corn was the most common crop grown, followed by oats, wheat, and flax. Several sod house owners planted potatoes, barley, and alfalfa. A couple tried millet and beans, while one tried "speltz." Almost no one who filed a proof application in these early years, before gasoline tractors became common, grew large acreages of row crops, though many hoped to increase the land devoted to them.⁶²

Although some editions of the final proof on homestead entry asked the claimant about numbers of grazing stock and compensation received, most forms asked only about the type of crop, number of acres cultivated, and amount harvested annually. Many homesteaders, the Penors included, listed the yield per acre without mentioning their efforts in cattle grazing or animal husbandry. The homestead paperwork of others, however, linked crops to feed or hay, suggesting that some in the area raised stock.⁶³ To a certain extent, the Penors started their operation with a mixed-use land base. The wagon caravan in 1907 included a milk cow and "about four head of just plain cows." By 1915, the ranch had added registered Red Poll cattle. According to John Penor, the corn, oats, and barley the family raised as the main crops in the early years were "strictly for feed." John also remembered that "wheat was

61. Penor, serial 09239/patent 314705.

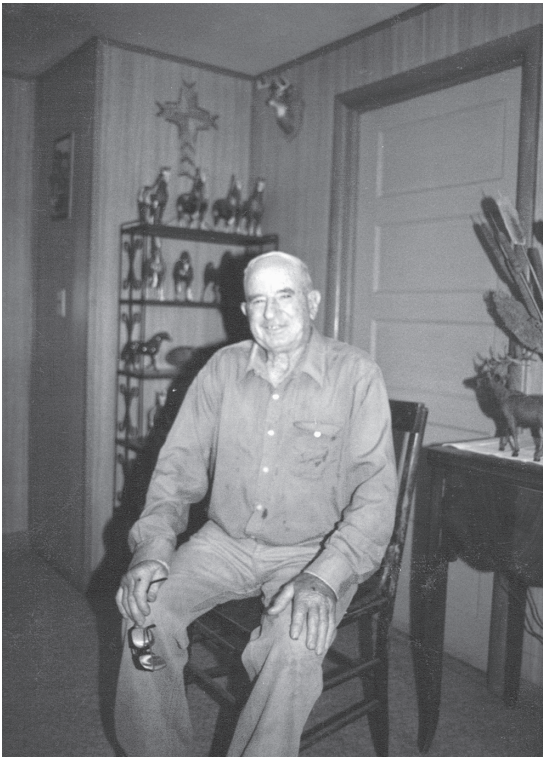
62. Bekken, serial 017670/patent 438880; Bengts, serial 010868/patent 654829; Bohna-sck, serial 09013/patent 665119; Byers, serial 09549/patent 307195; Ann M. Carr, serial 09494/patent 633910, Carr file; Dalton, serial 09098/patent 267281; Dragoo, serial 029789/patent 567235; Seidel, serial 09618/patent 407029; Englehart, serial 033220/patent 759419; Anton Lockert, serial 011020/patent 876122, Lockert file; Longwood, serial 08931/patent 134374; Spangler, serial 05023/patent 112547.

63. Penor, serial 09239/patent 314705; *Use and Abuse of America's Natural Resources: Circular from the General Land Office Showing the Manner of Proceeding to Obtain Title to Public Lands Under the Homestead, Desert Land, and Other Laws* (New York: Arno Press, 1972), p. 14.

quite a cash crop” for people in his particular area. Despite the brief rush of agricultural homesteaders, the region generally hung close to its range roots, especially along the Grand and Moreau rivers. About 1930, John Penor changed the operation to Hereford cattle.⁶⁴

The youngest of the boys, John took over the ranch operation because, he said, “Somebody had to keep the place going.” In addition to his parents’ homestead, over time John purchased some of the other Emerson Bunch land and additional parcels nearby. Most of those who stayed in the region built up their land base in this way, buying the land of the people who left as well as increasing their holdings in the early years with additional government claims and purchases. By the 1990s, John raised almost twelve times the wheat, oats, barley, and corn that his family had grown in the early years. He also maintained around

64. Telephone interview with Penor, 19 July 1993.



John Penor shared his memories in the original sitting room of the family soddie.



By the time this photograph was taken in 1990, the original sod house had been covered with siding and the interior paneled. Plants in the deep window sills provide the only clue to its sod house origins.

forty head of cattle and began raising horses, including thoroughbreds and purebred Arabians, which had emerged as a hobby in his boyhood. In 2007, the year he died at the age of ninety-one, he had forty Arabian horses that had free reign on the pastures of his twelve-hundred-acre farm/ranch.⁶⁵ The working plan of the operation in the late twentieth century concentrated on raising grain for feed. The cattle, he said, had “to pay their way and support the horses, too.”⁶⁶

Through all the changes in the operation, the economic ups and

65. See David Jensen, “Bison’s Celebrity Photographer,” *South Dakota Magazine* (July/Aug. 2007): 57. See also Steven Sebring, ed., *Bygone Days: Photography by John Penor & Family, 1907–1957*, with a foreword by Patti Smith (New York: D.A.P./Distributed Art Publishers, 2005). Sebring is John Penor’s grandnephew.

66. Telephone interview with Penor, 7 July 1993. Although herding sheep did not come up in my interviews with Penor, he refers to himself as “an old sheep herder” in Jensen, “Bison’s Celebrity Photographer,” p. 53.

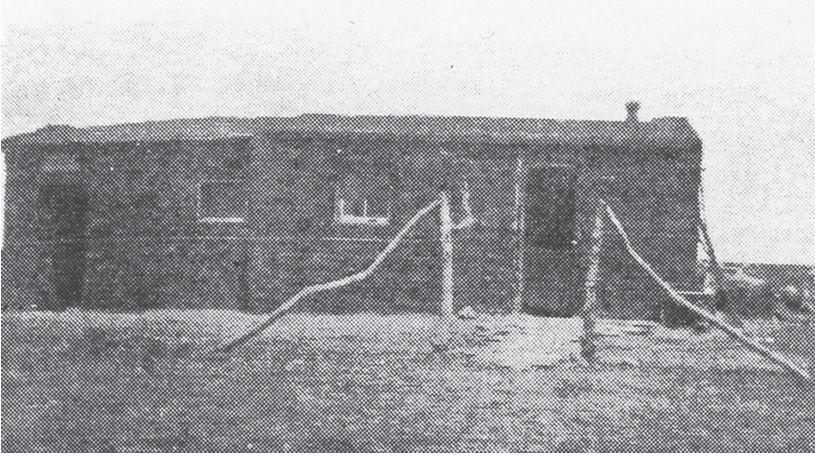
downs, and the installation of modern electrical, plumbing, and additional conveniences, Collis and Minnie Penor's sod house remained. "I wouldn't want any better place," their son John admitted. "I've got one stove in this house [in the frame room and] I can come in here [the sod-walled rooms] and sit down and be just as comfortable as if I was sitting by the stove out there. There aren't many houses that you can do that in."

Ann M. Carr and Sons: Four Soddies and a Pre-Railroad Town

Some fifty or so miles west of their final destination, Ann ("Anna") M. Carr, her sons George and Roy, and another family migrating with them found a timbered spot and unpacked the claim tent for immediate shelter. The group had happened upon a blizzard just thirty miles into "the Strip" that ran from the Missouri River to northwestern South Dakota. The families stayed in the timber for four days before the storm abated and then continued straight west, finally arriving on their previously selected 640-acre section of land on 2 May 1907.⁶⁷

Although her exact motivations for leaving Flandreau in eastern South Dakota for the West River country are unknown, Carr, fifty-three years old and a widow since 1902, may have been convinced by her sons to claim land they could eventually add to their own holdings. Four months before the move, in January 1907, George and Roy Carr rode the train west to the Missouri River and then drove a sled across the Strip. Together with a friend, they filed on three 160-acre homesteads at the same Seim branch of the Rapid City land office the Emerson Bunch had used. Records show that on 6 May 1907, Ann claimed the final quarter of the 640-acre section. Presumably, her boys finished her sod house, which, as she indicated on the paperwork, was done "the latter part of June." Before the summer's end, four sod houses met at

67. Except as additionally noted, the description and analysis of the Ann Carr sod house presented in this section come from a National Register of Historic Places Inventory Nomination Form in the Anna Carr Homestead National Register of Historic Places file, State Historic Preservation Office, South Dakota State Historical Society, Pierre, S.Dak., and my own observations. Ann ("Anna") M. Carr was born in Wisconsin, where she met her husband, Patrick Carr, born in the state of New York. Sudlow, ed., *Homestead Years*, pp. 1, 90.



The earliest known photograph of the Ann M. Carr sod house, built in 1907, shows the west wing post office addition. The main soddie lies behind, and the north wing addition is visible to the left.

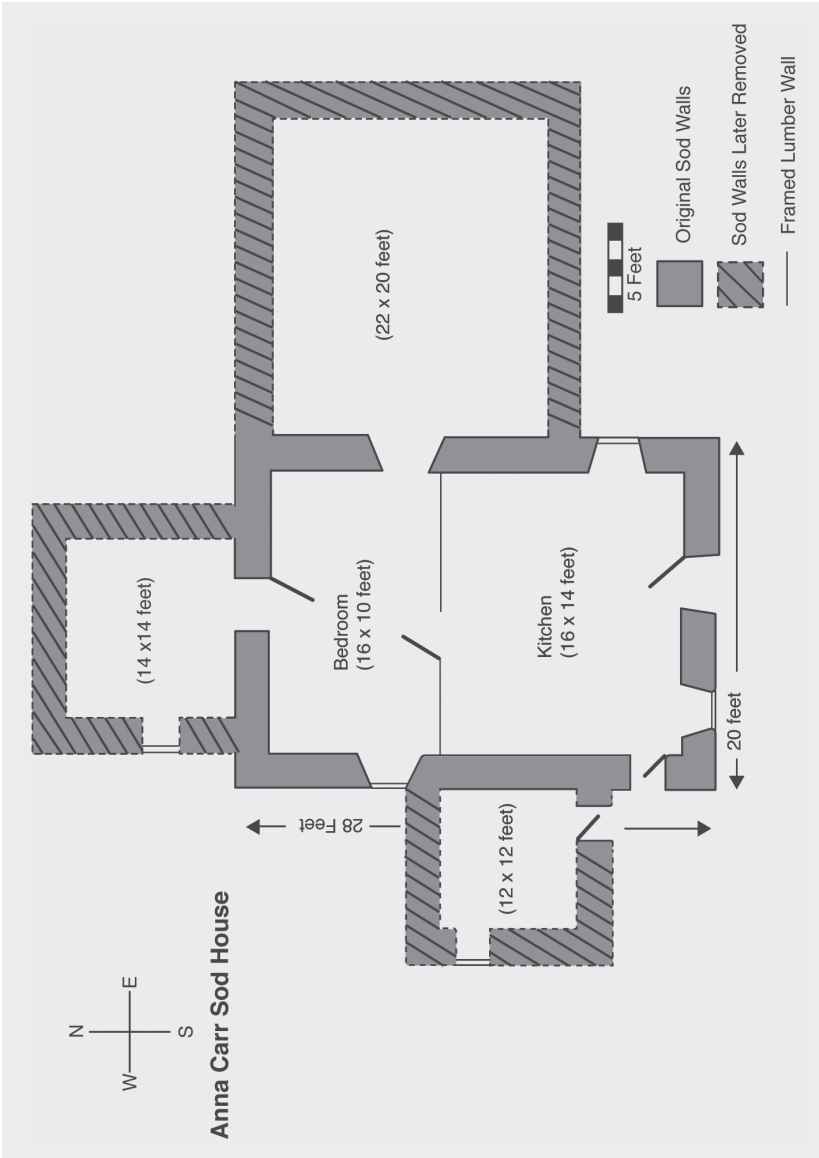
the section's four adjoining corners: Ann's on the northwest, Roy's on the southeast, and George's on the southwest, with the family who accompanied them on the northeast quarter. Together, they established the first "neighborhood" of what would soon become the town of Bison.⁶⁸

The Ann Carr sod house, listed in the National Register of Historic Places, started as a one-story, twenty-by-twenty-eight-foot rectangle with a low-pitched, side-gabled roof and a typical two-room floor plan. An internal framed wall divided the space into a kitchen/dining room and a bedroom. Early on, Carr added three sod "wings" to create more space: the east wing provided additional primary living space; the north wing, according to town memory, stored coal; and a small west wing served as the area's first post office.⁶⁹ At some point in the soddie's life, the wings were removed.

Carr's sons likely laid up the sod bricks that made her dwelling's nearly eight-foot-high walls. The builders used typical bricklayer's method,

68. Sudlow, ed., *Homestead Years*, pp. 1, 38; Carr, serial 09494/patent 633910.

69. Carr, serial 09494/patent 633910; interview with Dorothy Haugen, Bison, S.Dak., 2 July 1990; telephone interview with Penor, 19 July 1993.



but with a two-brick width instead of the three-brick-wide construction initially used for the Penor sod house. The ten-by-twenty-inch bricks were laid side by side, grass-side down (as can be seen in exposed walls), with the seams staggered and crisscrossed for strength. Laying the sod slabs grass-side down also stabilized the wall. With the dirt side up, the builders could use a wide spade with a long, flat blade to trim the top to level and then “push the slack stuff in the cracks,” recalled Billy Myers, who helped to build and who lived in at least one sod house.⁷⁰ Such finishing ensured that the walls rose evenly and, with some luck, settled relatively evenly. The outside walls of the Carr house show evidence of several stuccoings, from patching holes with a sand and mud mixture to coatings of modern cement. Looking at the “perfect” exterior stucco on his own family’s sod house well over a half century later, Johnny Allendorf explained that a builder had to wait two or three years for the walls to settle because if the stucco was applied too soon, “everything cracks.” He also advised getting “a masterful person with a sharp spade and axes to get them walls looking nice and smooth.” Another technique mentioned by many local observers, including Allendorf, involved driving steel or wood pins into the wall at numerous points to help secure the plaster.⁷¹

Instead of using local timber as the Emerson Bunch had done, the Carr group made several trips east to Evarts on the Missouri River over one hundred miles away to freight lumber back to their claim sites. Roof and floor boards, door frames, and window frames and glazing required a considerable investment. Although lumber provided the main material for the almost flat roof on the original Ann Carr soddie, a layer of sod anchored the roof from the wind in traditional fashion. This early lumber roofing system was replaced, at least by the early 1920s and probably before, with a medium-pitched gable roof made of lumber.⁷² In addition to the ridge pole, the new standardized dimensional lumber roof had three purlins, or beams, running parallel to the ridge pole with rafters extending from the ridge pole to the walls every

70. Interview with Billy Myers, Prairie City, S.Dak., 28 June 1990, Myers file.

71. Interview with John Allendorf, 21 May 1991.

72. Sudlow, ed., *Homestead Years*, p. 1.

couple of feet. Sod bricks filled in the gable ends up to the peaks. With asphalt shingles and generous eaves of several inches to help protect the walls, the new roof also provided the house with an attic.

The original Carr soddie's minimal fenestration included several fixed sash windows in a variety of pane styles, one on each of the south, west, and east walls and an additional window in the west wing. Builders placed the lumber window frames flush with the external walls, creating the classic deep-shelf interior window sills. They also set in the door even with the internal edge of the wall, presumably to create a small entryway to temper drafts from an opened door. The sod walls rose several inches above the height of the window frames, at which point a lumber lintel laid across the sod secured the walls on either side of the frame. Sod layering continued above the lintel to complete the walls. This construction method resulted in an open space between the top of the window frame and the lintel. Homeowners typically stuffed the space with "loose rags, paper or grass," which compacted as the sod walls settled, eventually bringing the lumber lintel down to the window framing and eliminating the space, the rags having been compacted or pulled out along the way. Without this detail, builders ran the risk of warping or jamming window frames that might break glass panes as walls settled under the weight of the roof.⁷³ Over the years, various owners enlarged the window spaces by digging out the sod to fit new double-sash, double-hung panes about two feet above ground level.

Each of the wings on the Ann Carr soddie has a history of its own, but because of its public role, the short-lived west wing holds an important spot in the origin of Bison, which eventually became the seat of Perkins County. The small sod addition was hastily added to Carr's home after the United States Post Office named her postmistress on 12 October 1907. Builders worked quickly because Carr had planned to run the post office from her home but found out she could not legally do so from a personal residence. Residents remembered the addition, now long gone, as extremely narrow, jutting out six feet from the soddie's west wall and only large enough for Carr's mailbox system; that is, her dresser and its drawers. The west-wing window space grew into a

73. Welsch, *Sod Walls*, p. 46.

Visible in this photograph are the lumber lintel placed above a window to prevent buckling and the grass-side-down method of laying the sod bricks.



door space and allowed Carr to make a quick entry from the house to serve postal customers. The ability to provide mail service completed the first stage of establishing a central service area from which a town might spring. Not only did the post office attract outlying residents to the Carr neighborhood, it also established a degree of federal recognition of the four-claim settlement.⁷⁴

The Carrs claimed land for agricultural purposes, but their actions

74. Sudlow, ed., *Homestead Years*, pp. 1–2, 19. Local authorities recall the west wing as very small (four by six feet or six feet by one foot), but the homestead proof papers Ann filed record the outside measurements as fourteen by fourteen feet. Later, when her son George moved the official post office to his new frame grocery store, Ann had the west wing removed and rebuilt the door space back in line with the original twenty-by-twenty-eight-foot soddie. Carr, serial 09494/patent 633910; Haugen to author, 6 Aug. 1993; telephone interview with Penor, 19 July 1993.

revealed them—or George, at least—to be energetic town-builders at heart, interested in the ground-floor construction of a new western community. In August of 1908, Ann transferred the post office to her son George's newly built grocery store, located west of her sod house. This structure became Bison's first frame building and commercial enterprise. It also reflected the arrival of the Milwaukee Railroad tracks at Lemmon, South Dakota, and Hettinger, North Dakota, the previous October. Lumber could now be freighted inland with greater ease from these railroad centers. Soon George Carr carved out forty acres of his claim and applied for an official townsite. Permanent mail service, George Carr's frame store, and the townsite application combined to create the village of Bison by the end of the summer, although officials did not plat the town until 1909.⁷⁵

75. Sudlow, ed., *Homestead Years*, p. 2; Robinson, *History of North Dakota*, p. 238.



Ann Carr is pictured here in front of her sod home sometime before she proved up and left Bison.

Enough population poured into the area to result in the division of Butte County. After voters approved reorganization in November of 1908, officials carved out Perkins and Harding counties. With the news of Bison's victory over the town of Lemmon in the contest for county seat, George Carr's townsite sprang alive with buildings.⁷⁶ By the time surveyors platted Bison the following March, residents could take in the services—or anticipate doing so in the near future—of a hotel, blacksmith shop, hardware store, livery barn, and courthouse. Freighters carried load after load of lumber south from the day-trip railheads to the new townsite to build, among other establishments, the newspaper headquarters and a land-abstract business. Finally, on 15 March 1909, two days after the official platting of the town commenced and only four months after the vote to divide Butte County, Erlandson Lumber Company established a lumberyard in town. By April, a barber shop, large mercantile business, second livery barn, Lemmon bank branch, bakery, meat market, restaurants, pool hall, and furniture store had materialized. By May, at least three land-office businesses handling law, loan, and abstract services operated in Bison. A new mercantile business took over grocery services, so George Carr moved his building to the main street to serve as a post office and drugstore, making a special trip to Minneapolis-Saint Paul to stock his new enterprises.⁷⁷ Sometime later, summarizing the successful look of the newly built town, one voice in the local newspaper boasted, “The lumberyard is doing a flourishing business. Our little city is becoming a very busy place and the man who said we could cut hay in the street was simply talking thru his hat.”⁷⁸

76. Local histories note that rancher and town namesake Ed Lemmon and a few other area ranchers spearheaded the 1908 effort to separate from Butte County. However, Meade County state legislator Henry E. Perkins, a banker in Sturgis, fathered the enabling act that allowed the residents of Butte County to vote on its division into three counties. The new counties were officially organized in January 1909. Buffalo won seat status in Harding County, and Bison, with fourteen more votes than Lemmon, won the seat in Perkins County. Sudlow, ed., *Homestead Years*, pp. 2, 40; Doane Robinson, “Ninth Annual Review of the Progress of South Dakota for 1909,” *South Dakota Historical Collections* 5 (1910): 60; Marjorie Evenson Catron, *Diamond Jubilee, 1909–1984* (Buffalo, S.Dak.: First State Bank of Buffalo, 1984), pp. 3–4.

77. Sudlow, ed., *Homestead Years*, pp. 1–6, 28.

78. *Ibid.*, p. 120.

Nearly all of the new residents of the mushrooming town of Bison used basic balloon-framed, false-front construction, historically designed to create, according to one architectural historian, a “permanent,” even “urban” atmosphere in fledgling western settlements. False-front construction constituted the germ of a potential city, and false second stories became advertising space for the businesses whose growth and success would hasten its rise. In the view of optimists, false fronts constituted only “a necessary step in a town’s rite of passage,” to be replaced with “buildings of grander scale and more precious materials.”⁷⁹ From March to May 1909, town founders succeeded in establishing Bison with a composite of regional services. While Bison is one of the area’s most enduring and active towns, and new solid buildings have been constructed over the years, the false-front, one-street aura remains. Bison’s staying power lies in its county seat designation.

The effort to replace false-front shops with grand store buildings echoes Ann Carr’s struggles with tree planting. As if foreshadowing her departure soon after proving up in 1912, none of the two hundred trees she planted on her claim in 1910, nor the one hundred trees she planted the next year, appears to have survived the drought of 1910–1911. Like the trees, Carr did not survive long in northwestern South Dakota. Her roots remained elsewhere, as signaled by her regular, months-long trips back to Flandreau each year throughout the entire homesteading pro-

79. Kingston W. M. Heath, “False-Front Architecture on Montana’s Urban Frontier,” in Carter and Herman, eds., *Perspectives in Vernacular Architecture*, III, pp. 201, 211.



False-front buildings rose quickly on the main street of Bison soon after the town was platted in 1909. From left to right (foreground) are a lodging house, bakery, land office, furniture store, abstract and law office, bank, and court house.

cess.⁸⁰ Her final departure may have come as a reaction to the drought, which delivered a severe blow to the recent development of the region and punctured the optimism that seeded growth. Population figures testify that many people left. According to the South Dakota state census, Perkins County fell from its 1910 population of 11,348 to 7,641 in 1915.⁸¹ Perhaps Carr homesteaded only to provide her sons with extra land and had no intention of staying, but in any case, she, along with her son Roy and the neighbors who had migrated with them to South Dakota's northwest moved back to Flandreau soon after proving up.⁸²

In 1913, a year after proving up and after the rest of his land claim cohort returned to Flandreau, town founder George Carr left his sod house and built a large, elaborate frame house. In his case, the sod house served in what might be termed its classic, or original intended use as a temporary first shelter in a new land, a house that would be replaced through seasonal profits from the land. With its impressive size, porch, dormer-window balcony, oval ornamental windows, and decorative wire yard fence, the new frame house symbolized the optimism of the town and of its founders. Tellingly, however, George Carr's sod house remained occupied until well past the middle of the twentieth century, standing until the late 1980s. In 1926, George Carr left, too, selling the drugstore and reportedly moving to Des Moines, Iowa, for his children's education. Perkins County never acquired adequate railroad access. The Milwaukee Railroad served the county only at Lemmon in the extreme northeast corner and across the state line at Hettinger. After only one other advance in 1911 to Faith, a town outside the county that served its extreme southeast corner, railroad building stopped. Easy freighting and access had to wait for the advent of automobiles and, more importantly, good roads.⁸³

80. Carr, serial 09494/patent 633910. Attempting to use her husband's service in the Civil War when filing for final proof on her claim the first time in 1911, Ann Carr listed 300 trees as an improvement on her claim; when she filed a second time in 1912, she did not list the trees.

81. Doane Robinson, "Progress of South Dakota, 1915," *South Dakota Historical Collections* 8 (1916): 65.

82. Sudlow, ed., *Homestead Years*, p. 16.

83. *Ibid.*; John Penor to author, 5 Aug. 1993; Haugen to author, 6 Aug. 1993; Nelson, *After the West was Won*, p. 86, and *The Prairie Winnows Out Its Own*, pp. 93–94, 99, 108–10.

The crops listed on many settlers' final proof applications convey the widespread nature of the drought of 1910–1911. The drought also helps to explain the frame addition to the Penor family soddie that year, as many homesteaders left and sold or abandoned small claim shacks. Tollef Bekken had the unfortunate luck to file an official land entry in November 1909. By August 1910 he had asked the land office at Lemmon for an official leave of absence. Bekken had already built a sod house, sod barn, and sod henhouse on the place, where he owned eight horses, nine milk cows, and one hundred chickens and lived with his wife and eight children. The weather, however, had left the family short. He explained to the land office: "I am a man of little means and . . . I took the . . . land to make a home for myself and family, as I have no home elsewhere. I broke some land this season, and would have broken more but the weather was so dry that the ground baked in such a manner that it was utterly impossible for the horses to pull the plow. . . . The lathe of the plow would get hot and turn up and bend in different shapes so that we was compelled to stop breaking. My crop is an entire failure, and I have neither hay nor grain to feed the stock that I have around me this winter, and I must leave the land and work, in order to procure money and feed to support my family."⁸⁴

The land office granted the leave that year and a second leave during the much more severe drought year of 1911. As Bekken explained in his second application for leave: "I entered on the said land in good faith. . . . [The] land is dry. . . . It is impossible to break and crop, and there is no hay so I am obliged to leave with my stock and all belonging[s] until there is some feed in the country, and there is something to do. I have been looking all over the country for some hay to cut, and there is none to get so I must leave. [T]here is a complete failure of all vegetation in my country, and on my place." The family also experienced tough times not mentioned in the leave applications. Bekken listed eight children in his first application for official leave and only seven on the second.⁸⁵

The final proof paperwork of Bekken's contemporary sod house builders tells a similar story for the years surrounding the drought of 1910–1911. Ann Carr, for whom Collis Penor and Fred Jennewein served

84. Bekken, serial 017670/patent 438880.

85. Ibid.

as official final proof witnesses, had “good” crops from 1907 to 1909, including a garden with sweet corn. In 1910 she “got practically no crop, too dry,” and the following year she reported the same. In 1911 the total yield for all of the Penor family’s crops consisted of fifteen bushels of potatoes from two acres. (In 1909 three acres of potatoes had yielded four hundred bushels.) Minnie Penor raised a poor one-acre garden that year. The remaining thirty-three acres of crops produced nothing on the Penor place; the proof of claim application filed at the land office read, “No other crop, too dry.” In 1911, Joseph Byers reported that he planted all corn and “did not get anything[,] too dry.” For Jess Dalton, the precipitation problem started in 1910, when, he explained on the paperwork, “It was so dry that I only harvested 10 loads of corn fodder from the whole field.” In 1911—the year he filed his proof papers—it was so dry that the seventy-five acres of corn he planted “never came up.” Franz Seidel, who planted crops on ninety acres, harvested nothing in 1911 and only thirty bushels of oats and twenty bushels of wheat in 1912. The Dragoo family reported widespread failure on nearly forty acres planted with corn, millet, oats, and flax in 1911 and 1912. Russian immigrant Anton Lockert called his 1910 forty-acre crop a total failure. Although the climate cooperated for increasingly better crops after 1912, John Englehart stated on his 1919 final proof papers that although he planted twenty-one acres in 1917, he had no harvest due to drought, suggesting the area would continue to suffer dry seasons. The dry years from 1910 to 1912 signaled the sometimes-harsh climate settlers and their children would come to know as “predictably unpredictable.”⁸⁶

Despite the departure of Ann Carr back to Flandreau in 1912, her original sod house remained occupied past the middle of the twentieth century. The long occupation history of the sod house remains obscure, but, as John Penor remembered it, “There was always someone living in Mrs. Carr’s sod house.”⁸⁷ From time to time, the soddie apparently became home to young people who needed a place to stay

86. Carr, serial 09494/patent 633910; Penor, serial 09239/patent 314705; Dalton, serial 09098/patent 267281; Byers, serial 09549/patent 307195; Seidel, serial 09618/patent 407029; Dragoo, serial 029789/patent 567235; Lockert, serial 011020/patent 876122; Englehart, serial 033220/patent 759419.

87. Telephone interview with Penor, 19 July 1993.

in town to attend high school. In the late 1930s, cowboy Fred Jennewein retired from the HAT ranch into the old sod house. By that time, its symbolic meaning had begun to change from representing the work of town builders to embodying a still sparsely settled country rooted in range agriculture. Prior to the Carr family's arrival, the grasslands surrounding Bison provided a home for some three thousand head of Turkey Track cattle awaiting branding.⁸⁸ Cowboys such as Jennewein and Albert McKinstry, who decided to settle in the area after the big cattle corporations declined, still formed an important portion of the area's population, and those homesteading families who remained echoed the cattle culture by establishing mixed-farming operations almost from the start of settlement.

The Carr sod house grew into a new public role during the celebration of South Dakota's fiftieth anniversary of statehood in 1939. Jennewein, then in his early seventies, began collecting memorabilia from the cowboy life he had known at the turn of the century. The front room of the sod house exhibited his "Pioneer Collection," while he occupied the back bedroom and the "ell" addition. Throughout the

88. Penor to author, 5 Aug. 1993; telephone interview with Haugen; Sudlow, ed., *Homestead Years*, pp. 37, 177.



This photograph from the time Fred Jennewein lived in the house shows the east "ell" addition.



A modern shed now protects the Carr sod house. Shown here is the north facade, with the outline of the north wing roof line clearly visible.

1940s, the Carr soddie served as a place for old-timers to meet, discuss history, and celebrate their age and achievements. Jennewein lived in the house until shortly before his death in 1955.⁸⁹

Emma Goerndt, then a widow, soon moved into the Carr sod house. Goerndt, who arrived in the area with her family, had also homesteaded as soon as she turned twenty-one, the age one qualified to file for public domain land. In 1914, she found a claim its original filer had relinquished, proved up on the land, and became known as a cowgirl for her love of horses and riding, both for pleasure and to herd her family's cattle. Like Jennewein, she lived mainly in the main frame addition. One of the original walls of the sod house had to be reinforced with cement, and Goerndt sent two young boys into the attic with instructions to daub every crack in the sod until "you see no daylight." As she

89. Sudlow, ed., *Homestead Years*, pp. 113, 177, 192. Before Jennewein left the sod house, his "Pioneer Collection" was transferred to a Works Projects Administration-sponsored rammed-earth building near the court house. From the larger base, he continued to collect range lore and material objects until the state offered to maintain his collection at the Custer State Park Museum in the Black Hills.



When the house became a museum, community residents donated the furnishings that are believed typical to the life lived in the house over the years. As seen in this view of the east (kitchen) wall, plaster adhered to interiors no better than stucco did to exteriors.

fondly remembered the home, “It was cool [in the summer] and it was warm in the winter time.” Though by then the house boasted electricity, it remained basically unmodernized, despite its location in a county seat town. Although Ann Carr had planted three hundred trees, not one had survived. Goerndt planted the elm trees now on the property before she left the house in 1967.⁹⁰

In 1975, the house’s final owner, Albert Schick, donated it to the newly formed Perkins County Historical Society, which worked to place the home on the National Register of Historic Places. The historical society underwrote a “Save Our Soddie” fundraising campaign to preserve the home for posterity, and Ann M. Carr’s sod house now serves as a public museum dedicated to the town’s early history.⁹¹

90. Interview with Emma Goerndt, Bison, S.Dak., 3 July 1990, Goerndt/Kolb files.

91. Telephone interview with Haugen.

O. F. and Molly Dragoo's Railroad Soddie

Health reasons lured Orloff Field ("O. F.") and Mary ("Molly") Dragoo, aged fifty-two and fifty-one, respectively, along with the Ellsworth Taylor family, from their home near Muncie, Indiana, to a homestead in northwestern South Dakota. Since the turn of the century, doctors had advised patients with asthma, whooping cough, tuberculosis, anemia, or just a case of "the nerves," that country living could return them to health. O. F. Dragoo, a dentist by profession, hoped to get out of a damp climate into clean, dry air.⁹² After filing on claims in March 1910, the Dragoos followed a well-established migration plan. They hired an immigrant rail car to move property destined for their homestead to the nearest railroad terminal at Hettinger, North Dakota. The trail from the railroad to the homestead led straight south, a day's journey of about twenty miles.⁹³

Plenty of homesteaders arrived alongside the Dragoos in 1910, but the human landscape of northwestern South Dakota had already been transformed from that of the rangeland society the Penor and Carr families glimpsed upon their arrival. The open land on which the Dragoos and the Taylors pitched tent houses was now central Perkins County, and the Carr section had become a busy county seat town. Homesteaders claimed almost half of the nearly 1.3 million acres available through the newly established Lemmon land office in 1910. The Dragoos did not know it then, but 1910 was near the peak of this homestead rush. The United States census listed the population of Perkins County at

92. Stanford J. Layton, *To No Privileged Class: The Rationalization of Homesteading and Rural Life in the Early Twentieth-Century American West* ([Provo, Utah]: Charles Redd Center for Western History, Brigham Young University, 1988), pp. 41–42, 48, 58–59.

93. My 4 July 1990 interview conducted in Lodgepole, South Dakota, with O. F. and Molly's grandson, Gordon Dragoo, and his wife Lorrie form the basis for this section. Additional sources appear as noted. O. F. (1858–1949), a native of Indiana, and Molly (1859?–1951) Dragoo had five children: Amanda, Kitty, Ray, Robert, and Edgar. Ellsworth Taylor and his son Herman traveled with the Dragoos; in 1915, another Taylor son, Earl, and his wife Nellie and their children Raymond and Martha joined them. Edgar Dragoo (1905–1962) and Martha Taylor (1915–1989) married and had four children: Gordon, Marie, Maurice, and Donald. *See also* Emma Henderson, Viola Doerr, and Helen Amsden, eds., *Wind and Waving Grass: A Story of Northwest Perkins County, S.Dak.* (Dallas, Tex.: Taylor Publishing, 1976), pp. 15–16, 82.

11,348 that year, a figure almost four times the 1900 population of the massive Butte County from which Perkins had been formed.⁹⁴ Even though the area was in severe drought, the rush for homesteads continued through 1911; the Lemmon land office processed almost nine hundred thousand acres of newly entered claims.⁹⁵

The family rode by team and wagon from Hettinger and established residence in a tent on their claim on 25 April 1910. The main work of the first summer involved laying up two sod homes near Little Nasty Creek. The Dragoos carefully chose a house site that almost brushed the “Hettinger trail,” while their friends chose a site on a hill in order to gain the most panoramic view of the land.⁹⁶ Extra planning and great care in the construction of the Dragoo sod house resulted in a comfortable and stable home. The timber-rich soddie evidenced its nearness to the railroad town of Hettinger and the high level of freight business moving from both Hettinger and Lemmon to Bison. The Dragoo structure reflects years of local experience—and decades of regional experience—with sod. The house followed a large, standard rectangular plan, measuring twenty-two by forty-two feet and topped with a gable roof. A two-foot-wide internal sod wall and a second story made the home unique. The interior sod wall, designed as structural support for the roof and the second floor, divided the main house into a living room and a kitchen. A wire-hung curtain portioned off a small room in the corner of the living room, probably to serve as a bedroom for O. F. and Molly.⁹⁷ The second story provided accommodations for boarders in two bedrooms reached by a central stairway, also unusual.

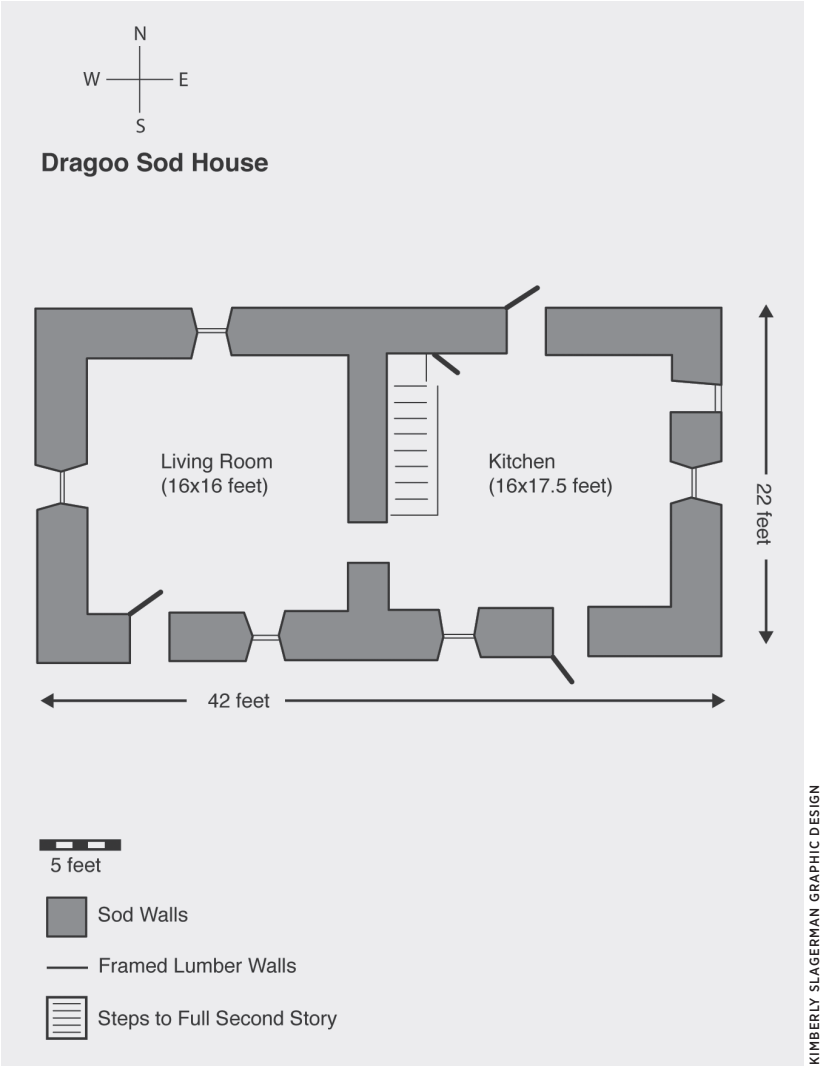
The sod used for the house came from a slough, where one finds premium sod, according to grandson Gordon Dragoo. Many descendants knew the location where the material for their sod homes had been collected. Gene Lenerville could identify the draw where the sod

94. The United States Census recorded Butte County's population as 2,907 in 1900 and the state census as 3,975 in 1905, when the county included the land that later became the new Harding, Perkins, and Butte counties. See Robinson, “Progress of South Dakota, 1915,” p. 65, and Doane Robinson, “Fifth Annual Review of the Progress of South Dakota for 1905,” *South Dakota Historical Collections* 3 (1906): 36–37.

95. Hargreaves, *Dry Farming*, p. 379.

96. Dragoo, serial 029789/patent 567235; Henderson, Doerr, and Amsden, eds., *Wind and Waving Grass*, pp. 15, 82.

97. *Bison Courier*, 10 Feb. 1993.



in his parents' house came from.⁹⁸ Johnny Allendorf could still see the indentation in the ground where the grassy sod had been severed to a depth of four inches for the construction of his parents' house. His father, however, used threadleaf sedge sod, a strong grass-like plant that came from the top of a hill. Others thought the moisture content

98. Interview with Lenerville.

of low-lying grasslands yielded more stable bricks. As he pointed out the “humps” and “chunks” of sod melting back into the location from which his father had taken them, Allendorf tended to confirm this observation, explaining, “Some of them chunks would break on them when they were loading.”⁹⁹

Oliver Green agreed with Dragoo, stating, “Tough sod, out of the bottom of a creek” was best because it “couldn’t hardly tear apart.” Sod taken from higher ground could crumble, resulting in “a lot of waste.” According to Green, builders “laid it fresh, very little watering done to it, just sprinkled it a little bit so it would just stay moist while they were laying it.”¹⁰⁰ Aldin Erikson, however, agreed with Allendorf, naming threadleaf sedge as ideal for sod bricks, emphasizing that “it didn’t have to be moist.” He also knew where the sod for their house came from: on top of a high benchland “up above the creek, right on a straight flat.”¹⁰¹ Billy Myers claimed that “good fiber” remained the most important aspect of sod brick cohesion. Certainly, the type of grass, season, and moisture content on the day the sod was cut all mattered to creating lasting and malleable but strong sod bricks.¹⁰² Emma Goerndt said she did not build a soddie for her 1914 relinquished land claim because “it was too dry to plow it. We had bought the materials for a sod house. But we never got to use it.” Handling sod took skill, no matter where one lifted it off the land.¹⁰³

The Dragoos built the sod walls of their house in classic double-brick-wide, staggered-seam, grass-side-down layers. They cut their sod using a sulky riding plow with breaker bottom blades set to cut even slabs of twenty-four by fourteen by four inches. Innovative in building method, the Dragoos instituted a drying period approximately every second layer so that the sod could settle as the walls went up. The builders hoped the method would decrease the sagging and bowing common to many sod dwellings. In laying up the rows, the men alternated between the Dragoo and Taylor house sites. The walls of the Dragoo

99. Interview with John Allendorf, Prairie City, S.Dak., 30 July 1990, Allendorf file.

100. Interview with Green.

101. Interview with Aldin and Varna Erickson, Bison, S.Dak., 1 Aug. 1990, Erickson file.

102. Interview with Billy Myers, Prairie City, S.Dak., 1 June 1990, Myers file.

103. Interview with Goerndt.

house rose in approximately twenty-four layers to seven feet in height before more sod bricks were layered up on the gable ends. The house reportedly took some 135 wagon loads of sod to construct.¹⁰⁴

The railroad station at Hettinger and the services established there provided later sod house builders with as much choice and control in the building process as they could afford. Liberal use of commercially produced milled lumber, especially in the roofing system, made the Dragoo house one of the more elaborate. The lumber came from a variety of sources: some freighted from Hettinger; some likely from the Bison Lumber Company; and possibly some second-hand wood recovered from buildings no longer used, which ended up in the roof over years of maintenance.¹⁰⁵ The roof is a simple gable, common rafter style found in the average frame house of the period, but with longer-than-average eaves. In addition to a ridge board, two principal purlin beams extend the length of the roof near the eave and at the midway point of the slope on each side. Builders placed two-by-four-inch rafters on the

104. Henderson, Doerr, and Amsden, eds., *Wind and Waving Grass*, p. 16.

105. Telephone interview with Lorrie Dragoo, Prairie City, S.Dak., 27 July 1993; Lorrie Dragoo to author, 19 Aug. 1993, Dragoo file.



O. F. and Molly Dragoo pose in front of their two-story sod home.

wall from the eave to the ridge every few feet, and crossbeams placed about every foot rested on a lumber plate that ran around the wall perimeters. The gable ends used one tie beam each. Roof boards ran the length of the soddie from west to east in three sections of different sized boards: eighteen-foot, six-foot, and sixteen-foot, resting on rafters spaced at three-foot intervals, more space between them than the norm, probably to conserve lumber.¹⁰⁶ Using sod in the gable ends also saved lumber. Lumber planks ran the length of the house, resting on both exterior and interior sod walls and cross beams used for the second-story floor.

To increase stability, builders drove foot-long wooden stakes through the sod above the perimeter's eave-level lumber plate board, which was already drilled with holes and had rafters nailed to it. Finally, hooks and wire helped secure the roof at the three doorways.¹⁰⁷ The weight of the sodded gable ends also helped anchor the roof. They were reinforced with wooden stakes driven through two three-foot lumber planks placed horizontally midway up the gable, with the principal purlins resting on them. The sods laid from the planks to the peak served as added weight. Thus, the elaborate Dragoo roofing system remained secure in the wind, despite its longer-than-average eaves that functioned to protect the sod walls from erosion by precipitation. A final layer of water-shedding rubberoid secured with lath completed the roof.

Most twentieth-century sod houses received standard commercial roofing from the start. As Cornelies Van Den Berg said, "Use regular rafters just like you would on anything else."¹⁰⁸ Similarly, the Allendorf sod house included an impressive four-cornered hip roof built by a skilled carpenter who created it before Johnny's eyes from merely "a pile" of lumber.¹⁰⁹ These roofs could have topped any frame house and, because the owners expected to live in their sod houses for some time, were more elaborate than one might expect. The Dragoo sod house roof and other similar styles suggest why many sod houses in north-western South Dakota had such longevity.

106. Telephone interview with Robert Carr, 31 July 1993, Robert Carr file.

107. Telephone interview with Lorrie Dragoo.

108. Interview of Cornelies Van Den Berg.

109. Interview with John Allendorf, 30 July 1990.



This south view of the Dragoo soddie, photographed in 1990, highlights the extensive use of lumber in the roof.

A rich fenestration of three doors and eight windows provided the Dragoo house a good ventilation system. The five double-hung windows—in a variety of pane styles—and a half window on the main floor furnished the house with considerable daylight. Two additional half windows, one in each gable of the second story, allowed the same upstairs. Builders set in the window and door frames as the walls went up but located the window frames midway in the wall instead of flush with the exterior. This window placement lessened the depth of the interior window shelves but provided more protection for the glass panes. Lumber ceiling planks allowed a small gap to control wall settling, but in the Dragoo house, a sandy mixture rather than rags or grass filled the space between lintel plates and window frames.¹¹⁰ Extra strips of wood nailed perpendicularly to the sides of the window case-

110. Telephone interview with Carr.

ments helped secure the windows firmly in the walls. As the sod dried with age and shrank away from the frame, the wood strips jutting into the wall sod kept the window from falling out.¹¹¹ Rags stuffed along the edges of frames at some later point suggest shrinkage, and drafts continued to plague aging soddies despite care and planning. Manufactured doors placed centrally in the north and south walls created a nice cross-draft in the kitchen; a window placed in the north wall opposite the door in the south wall of the living room created similar ventilation.

Finishing features of the Dragoo house reflect the high level of consumer goods available because of the railroad's proximity. One of the most unusual features is an enclosed, railless, L-shaped stairway, supported in part by the interior sod wall. The stairstep planks span two

111. Dragoo to author, 19 Aug. 1993.



The west facade of the Dragoo soddy featured both double-hung and half windows. Also visible are the lumber planks staked in the sod, on which the plank purlins rest, and the eave plate board that runs across the wall above the lower window.

diagonal supports in a way reminiscent of a ladder, and the enclosed space under the stairwell served as a closet, an unusual space in sod houses. The homemade doors to the closet and stairwell consist of lumber planks joined by a “Z” cross-brace system. A board floor resting on crossbeams and a ceiling of fiberboard squares attached with lathing strips completed the interior structure.

Remarkably, the exterior walls of this sod house have never been stuccoed or sheathed. The only outside finishing detail consists of a lumber retaining wall placed about a foot from the house around its perimeter. At least two layers of plaster cover the interior walls, including a sand-and-water mixture and a coat of firmer plaster. A series of nails pounded into the interior sod walls at even intervals helped bond the plaster to the sod. At the time of documentation, a solid rose-pink wallpaper adorned the living room, and soft white paint with sections of off-white rose-patterned wallpaper covered the kitchen. Two coal stoves, one in the kitchen and one in the living room, heated the house.¹¹²

In the early years, the Dragoos added on to the kitchen with a frame lean-to on the north side of the sod house. The addition allowed for a few extra features. Since Little Nasty Creek provided water nearby at a depth of about five feet, the Dragoo house had running water almost from the beginning via a small pitcher pump. A second innovative feature, a square cement cooler located next to the well, allowed running water to cool gallon pails of butter and milk during the warm summer months. A raised lumber floor in Molly Dragoo’s kitchen covered a small cellar hole with just enough room for food storage.¹¹³ The features of the kitchen system reveal that cooking was central to the Dragoo homestead plan.

Shortly after completion on 13 August 1910, the Dragoo sod house opened for business. O. F. and Molly would take in travelers of two main types: other “honyockers” looking for land claims and already settled homesteaders traveling between Bison and the railroad at Het-

112. Ibid; telephone interview with Dragoo, 27 July 1993; *Bison Courier*, 10 Feb. 1993.

113. Henderson, Doerr, and Amsden, eds., *Wind and Waving Grass*, p. 16; telephone interview with Dragoo; Dragoo to author, 19 Aug. 1993.

tinger.¹¹⁴ The sod house became a regional “halfway house,” a place to lodge overnight while on the road with one’s horses and wagon. Freighters hauled staple foods (flour, coffee, sugar), building supplies, and consumer goods back and forth between scattered inland cross-roads and villages such as Bison and Hettinger. Individual travelers, on their way to or from the same places for business or to transport crops or cattle to market also stopped to rest. Stock sheltered in the outbuildings, while travelers slept upstairs or even outside.¹¹⁵ Lee Kolb recalled, “We stopped there one night when we were trailin’ cattle.” His wife Irene (Emma Goerndt’s daughter), noted that her father also stayed at the Dragoo house.¹¹⁶ Payment for board and lodging ranged from cash to trade for groceries, produce, meat, or even day labor.¹¹⁷

114. “Honyocker” is a term for homesteader, but the term often refers to those that made up the “rush” of homesteaders that came with the railroad.

115. Dragoo, serial 029789/patent 567235; telephone interview with Dragoo.

116. Interview with Irene and Lee Kolb, Bison, S.Dak., 30 July 1990, Goerndt/Kolb file.

117. Telephone interview with Dragoo.



The Dragoo sod house is pictured here in 1990. Except for the surrounding trees, the house looks much as it did during the homestead years.

The location of the sod house and the sociability of the Dragoos made this road ranch one of the best known in the community. Local history recalls O. F. as an educated man, a former teacher and dentist with a degree from Purdue University.¹¹⁸ The wealth of window space in the soddie provided O. F. with light for reading magazines and books. The family also purchased a thirty-two-volt wind-charger battery system to supply electric lights. One of the few people in the region to own a library (which consisted of “twenty or thirty books”), O. F. was considered well-read in an array of subjects, ranging from the history of Dakota Territory to world history. His library contained titles such as Homer’s *Iliad* and Shakespeare’s *Plays and Poems* as well as popular novels such as *The Cavalier* by George Washington Cable, *The Afterglow* by James Fenimore Cooper, and *Dream Life: A Fable of the Seasons* by Donald Grant Mitchell. Sometime after arriving in the state, he added a collection entitled *Literature of South Dakota* by O. W. Coursey. O. F.’s conversational manner, along with his easy chair, a magazine rack several feet high, and, in later years, radio-listening sessions, made him memorable.¹¹⁹

Dragoo descendants remembered Molly Dragoo as the main manager of the entire homestead. She ran the household, did the cooking, and oversaw the milk cow, while the older sons did the farming. Visitors also remembered her and the hundreds of meals she cooked and served with her welcoming smile. Martin Anderson, who grew up in a sod house near the Dragoos, recalled Molly singing as she cooked breakfast. The reason for the care taken in the kitchen features of the house—the pitcher pump, water cooler system, and adequate cellar storage—becomes clear when seen in the context of the boarding business. Molly also did needlework, wove rag rugs for the floors, processed lye soap, and made buffaloberry pie. She seemed to thrive in the social times of the homestead era.¹²⁰

118. Records from Purdue University, West LaFayette, Indiana, list O. F. Dragoo with a bachelor of science degree on 15 May 1886.

119. Telephone interview with Dragoo; Dragoo to author, 19 Aug. 1993; interview with Anderson.

120. Sudlow, ed., *Homestead Years*, p. 192; Dragoo to author, 19 Aug. 1993; interview with Anderson; Henderson, Doerr, and Amsden, eds., *Wind and Waving Grass*, p. 16.

As the homestead rush ended and automobiles started to change freighting patterns, the Dragoo family began to acquire sheep and more land. Actually, by the time O. F. Dragoo entered final proof on his claim at the Lemmon land office in August 1916, he had filed for an additional homestead of forty acres under the Enlarged Homestead Act of 1909. Lawmakers designed the act to allow homesteaders to increase their land holdings with scattered, isolated tracts near their original homesteads, charging a fee of fifty cents an acre. At the time of proving, the Dragoo family clearly had a mixed farm-ranch operation. Remarking on each of several blocks of land within the quarter section, O. F. explained that “only 5 or 6 acres could be cultivated” and described the rest of the quarter as “quite” rolling. One of the four witnesses required to make testimony for every final proof application explained that in addition to the forty-three acres of land broken on the Dragoo place, two particular blocks had been used for hay and pasture, with the remaining quarter described as “very rolling and better adapted to stock grazing.”¹²¹

Many final proof records among this group of sod house builders suggest the concept of mixed farming—stock and crops, the latter either for feed or sale or both—guided the area’s homesteading production plans. Joseph Bengts reported putting up seventeen tons of hay in 1909 and twelve tons in 1910. He also mentioned “3 horse[s] and a colt, 2 cows and 3 yearling and one spring calf” on his place. Henry Bohnasck, who entered his land claim in 1904, explained on his final proof papers that he bought the improvements, including the sod house, when he came in 1903 and had run approximately 125 head of stock on the rolling land each year. He always utilized the crop raised on his thirty-five cultivated acres for hay. According to one witness, Bohnasck also ran an average of about fifteen horses on his land. Similarly, Joseph Byers reported feeding all of the crops he raised to his stock. Jess Dalton, who had one of the largest acreages in crop, nevertheless always harvested all of his seventy-five acres as corn fodder. One of John Englehart’s final proof witnesses testified, “The claimant keeps some cattle, horses and farm machinery on this place.”¹²²

121. Dragoo, serial 029789/patent 567235. See also Hargreaves, *Dry Farming*, pp. 376–77.

122. Bengts, serial 010868/patent 654829; Bohnasck, serial 09013/patent 665119; Byers,

Similar to Fred Jennewein and Albert McKinstry, William Longwood had lived in western South Dakota since 1899, and in the northwestern part of the state since at least 1902, when he entered on what he described as “partly level grazing land” with only fifteen cultivable acres. Longwood planted the minimal ten acres required by the Homestead Act, all to “garden truck,” or market, and explained that he owned and “grazed from 100 to 290 head of various stock each year” on what his witness described as “rolling prairie.”¹²³ Over eighty years later, Judith Longwood, who married William Longwood’s son in 1934 after she came to the area to teach, recalled her husband frequently saying, “It’s the cows that helped make this country. It’s been a good cattle area. Takes a lot of acres to raise cattle.” Speaking at the end of the twentieth century, she emphasized, “We don’t farm at all.”¹²⁴

In 1928, O. F. and Molly’s youngest son, Edgar, who married the Taylors’ daughter, Martha, moved a two-room frame house near the soddie and began to take over the operations. Edgar Dragoo acquired the original homestead around 1935, reportedly “through the payment of its back taxes.”¹²⁵ In addition to the sheep operation begun earlier, Martha also raised a few cattle for butchering.¹²⁶ By steadily increasing the ranch’s holdings, the Dragoos’ son and daughter-in-law “bought the land up and made it into a working, livable place, that you could make a profit off of,” according to Edgar’s son Gordon Dragoo. The current ranch, operated by Gordon and his wife Lorrie, has an estimated land base almost twelve times the original two-hundred-acre homestead. They lived in a frame house next to the old soddie, which O. F. and Molly left from 1935 to 1940 to live with their daughter Amanda and her family on a farm in upstate New York. However, family narrative holds that homesickness compelled the elderly couple to return to the region and their sod home, where they lived until their deaths in the early 1950s. Gordon last used the soddie as a residence in the late 1950s, after it had been wired for electricity, while he prepared another

serial 09549/patent 307195; Dalton, serial 09098/patent 267281; Englehart, serial 033220/patent 759419.

123. Longwood, serial 08931/patent 134374.

124. Interview with Longwood.

125. Dragoo to author, 19 Aug. 1993.

126. Telephone interview with Dragoo.

house for himself and his wife. Just as Martin Anderson's father had listened to the radio with old O. F. in the house, Martin recalled enjoying card parties in the soddie while Gordon lived there.¹²⁷

At the end of the twentieth century, the Dragoo house still stood, albeit showing some of the effects of wind and rain erosion. Gordon and Lorrie Dragoo frequently showed the house to schoolchildren and residents as a reminder of the region's history. Although no one stays overnight at the Dragoo sod homestead anymore, they still regularly pass by—now in cars on the blacktopped highway—on the way to Hettinger, which still serves as an important service center for northwestern South Dakota.

Of Sod Building and Rural Adaptation

Out of the variety of housing choices available to them, the Penors, Carrs, and Dragoos all chose to build sod houses. They also happened to be older when they made their land claims: the Penors in their late forties; the Dragoos and Ann Carr in their fifties; and George Carr in his thirties. Of the thirteen homestead records associated with the northwestern South Dakota sod houses documented, only four claimants were under thirty years of age. It is plausible that the ideas of these older settlers about homesteading and what they hoped to accomplish were shaped more by nineteenth-century notions of agriculture and the ideals underlying the 1862 Homestead Act than by the technological advancements occurring at the turn of the century.

In addition, the Penors, Carrs, and Dragoos all proved up their claims on the five-year proof plan. In doing so, they were a minority; only 58 of 281 homestead claimants in Bison Township where the Emerson Bunch and the Carr group settled proved up on the five-year plan.¹²⁸ Four of the original filers with extant sod structures explored here seemingly commuted their homesteads, a desirable option for those who desired quick ownership and the flexibility to speculate and sell the land for more than the fifty cents per acre they had paid. If a

127. Henderson, Doerr, and Amsden, eds., *Wind and Waving Grass*, pp. 15, 16, 82; interview with Anderson.

128. Jeffery B. Roet, "Agricultural Settlement on the Dry Farming Frontier, 1900–1920" (Ph.D. diss., Northwestern University, 1982), p. 95.

homesteader waited to prove up, he or she did not have to pay taxes on the land. If one intended to stay, then, there would be no reason to pay fifty cents an acre for the privilege of paying taxes. Though many may not have been able to afford to commute their land claims, five-year homestead entries increased the likelihood that the homesteader intended to stay.

The sod houses built by the Penors, Carrs, and Dragoos conformed to the regular rectangular sod house type, but in the details each structure reflected the particular circumstances of its builders and occupants.¹²⁹ They suggest persistence and adaptation in the sod house building tradition over many years in the grasslands region. Even though the Penor family made two trips hauling supplies to the claim site, they carried only enough lumber for the house to set store-purchased windows and doors in the sod walls. The Penor sod house, with its log roof ridge pole and rafters made of ash, echoed a pre-railroad period of building when manufactured materials were scarce on the plains. The sod houses the Carr claimants built used modern milled dimensional lumber for their roofs from the start and exhibited more typical turn-of-the-century sod house construction. They freighted in lumber for floors, windows, doors, roof beams, and rafters from a distant railroad town. The extensive use of lumber in the Dragoo sod house suggested the relative immediacy of railroad connections. With day-trip access to standardized milled lumber and all manner of building hardware, finishing products, and tools, financial resources began to outweigh time and distance in builder calculations. Proximity cut both the price of lumber and the cost of hauling it.

The nexus of settlers, public land, railroads, and lumber has long been understood as vital to the business of encouraging the agricultural component of westward expansion.¹³⁰ From 1879 to the late 1880s, for example, “millions of board feet of lumber had been transported . . . and sold to settlers” in the eastern half of Dakota Territory.¹³¹ Geog-

129. John F. Moe, “Concepts of Shelter: The Folk Poetics of Space, Change and Continuity,” *Journal of Popular Culture* 11 (1977): 220–21, 242–49.

130. Dick, *Sod-House Frontier*, pp. 11–13, 53–58, 134, 138–47.

131. John Nunn Vogel, “Great Lakes Lumber on the Great Plains: The Laird, Norton Lumber Company in South Dakota” (Ph.D. diss., Marquette University, 1989), p. 134.

rapher John C. Hudson pointed out that western North Dakota likely had the fewest number of sod houses in the region, precisely because the transcontinental Northern Pacific and Great Northern railroads built quickly across the state after 1879, situating the area well for the branch-line boom to come after 1900. In North Dakota, two-thirds of all frame construction occurred within twenty miles of a railroad station, suggesting that distance from claim site to railroad-town service center played a role in early settlement-era buildings.¹³² The difference in habitation structures within a land area as similar in environmental makeup as southwestern North Dakota and northwestern South Dakota indicates the importance of railroads to settlers' construction decisions.

Settlers in northwestern South Dakota never benefited from more than edge-area railroad access at Hettinger, Lemmon, and Faith.¹³³ Commercial lumber companies made manufactured lumber readily available throughout the entire "sod-house frontier," but in northwestern South Dakota railroads never reached far enough inland to provide full and convenient infrastructure to the entire population. Bob Week noted that those who wanted or needed lumber "had to haul it clear from Hettinger, where the railroad was at."¹³⁴ Cornelies Van Den Berg recalled, "Early arrivals, they had to go to the railroad and then they had freight wagons." In his locale, one man made a 120-mile round trip with horses every week.¹³⁵ Sod made sense in this specific geographic and social context, where a convergence of climate, limited railroad access, and a decrease in the ratio of people to space after the drought of 1910–1911 made new railroad branches increasingly unlikely. Upon reflecting, Bob Week concluded that even though the lumber had to be freighted in, "it wasn't so costly, but they didn't have much money, a lot of them here."¹³⁶ Moreover, as homestead records reveal, land claimants made construction choices in the context of the costs of founding

132. Hudson, "Frontier Housing in North Dakota," *North Dakota History* 42 (1975): 8, 14.

133. Schell, *History of South Dakota*, pp. 243, 253; Nelson, *After the West Was Won*, pp. 86, 88.

134. Interview with Bob and Faye Week.

135. Interview of Cornelies Van Den Berg.

136. Interview with Bob and Faye Week.

entire farm-ranch operations, not simply building homes.

Railroad towns on the edges of northwestern South Dakota nevertheless allowed sod house owners in the modern twentieth-century era to take considerable advantage of manufactured, mass-produced finishing materials such as milled lumber, commercial stucco, plaster, cement, wallpaper, paint, rubberoid, asphalt, paneling, nails, hinges, oilcloth, burlap, curtains, doors, windows, metal products, tools, and, eventually, insecticides and wind-charger light plants. The availability of materials to build tight, finely finished houses with elaborate roofing systems eased or altogether solved the worst aspects of sod house living, such as leaky roofs, crumbling walls, constant dirt, darkness, and pests.¹³⁷ Notions of the structural longevity of the sod house, first formed between the 1860s and 1880s, proved partially outdated in an industrial manufacturing context. House maintenance with the goods and tools available in the first half of the twentieth century kept many sod houses quite comfortable and standing for decades.¹³⁸ Even in the early years, Douglas Nash, listed as a witness on Henry Bohnasck's final proof papers, noted that the latter's house was "cemented."¹³⁹

Sod houses had problems with insects, mice, and sometimes snakes, although, by the late twentieth century, most former residents spoke about these problems only historically, as attached to the then-distant decades of the early 1900s to the 1930s. Billy Myers recalled as a boy reading the Little Falls, Minnesota, newspaper that had been pasted with flour and water on the interior walls of his family's sod house. "Mice would get in there and then—you could hear them—where they was chewing—eating the flour. Sometimes they'd eat right through the paper." Myers's mother would pinpoint the location of the rodents and "stab them with a butcher knife. She got them too. She'd just cut them out of there. . . . and patch it over again."¹⁴⁰

137. On building and finishing projects available, see Sandra Rollings-Magnusson, "Sod, Straw, Logs, and Mud: Building a Home on the Canadian Prairies, 1867–1914," *Journal of Family History* 40, no. 3 (2015): 399–423.

138. Freed, *Preserving the Great Plains*, suggests that sod houses generally survived five to ten years (p. 50), while Dick, *Sod-House Frontier*, cites survival at six to seven years (p. 115).

139. Bohnasck, serial 09013/patent 665119.

140. Interview with Myers, 1 June 1990.

Similarly, Virgil Worm recalled the bedbug infestation behind the plaster on the walls and in the roof of a sod house leased by his family. The pests liked to come out at night, and one could hear them drop from the ceiling. Worm remembered his father going around with a kerosene lamp and picking them off the ceiling. Although bedbugs never bothered him, Worm never forgot the time he counted thirteen of them on his sister's face.¹⁴¹ The family's bedbug problem ended in the late 1930s, as Virgil's brother Emery revealed, when "the government sprayed all the houses" with DDT.¹⁴² On the other hand, former sod house dweller Faye Week noted snakes and mice in her modern home.¹⁴³ Oliver Green echoed Week, saying, "I've seen lots of frame houses that had more bugs in them than a sod house ever had."¹⁴⁴

The persistence of sod-constructed buildings in northwestern South Dakota speaks not only to some of the same factors that halted railroad construction in the area's early social development but also to the long wait of rural people generally—and the sparsely populated Great Plains in particular—for a feasible infrastructure of modern conveniences, such as electricity, plumbing, and good roads. As many descendants suggested, a poorly insulated lumber claim shanty, the shadow of even a simple balloon-framed house, also hosted bedbugs, snakes, and mice and proved little better than the sod house. Until rural electrification, sewer lines, modern insulation, commercial insecticides, and additional quality-of-life improvements changed expectations for home conveniences in rural areas generally, homes of all construction types in northwestern South Dakota experienced many of the problems associated with sod house living. Sod house residents, however, considered a home's quality to be more closely related to good maintenance and housekeeping than to whether it was constructed of sod or lumber.

Bob Week pointed out another fact about lumber shanties that also had a bearing on building choices: lumber shacks were cold. Many one-time sod house residents related some version of Gladys Jackson's assessment of the homes' benefits: "It was always cool during the day

141. Interview with Virgil Worm.

142. Interview with Emery Worm, Prairie City, S.Dak., 28 July 1990, Worm file.

143. Interview with Faye Week, Prairie City, S.Dak., 31 July 1990, Week file.

144. Interview with Green.

and warm in the wintertime.”¹⁴⁵ Martin Anderson shared the same sentiment but also noted, “In the summertime it stays cool until it gets hot day after day, then the walls get warmed up [and] stay hot.”¹⁴⁶ Recalling her childhood, Lois Eggebo echoed Anderson, stating, “The house would be pretty cool until you had several hot days in a row, then it seemed like it . . . just couldn’t cool off.”¹⁴⁷ Bill Lane suggested lifestyles in sod or frame houses were the same, except sod houses were “a lot warmer in the winter—cooler in the summer . . . just for [having] thick walls.”¹⁴⁸ Lee Kolb added, “You couldn’t hear the wind in there either. . . . It was pretty tight.”¹⁴⁹ During stormy weather, Eggebo “really felt safe . . . because your walls didn’t shake.”¹⁵⁰

145. Interview with Jackson.

146. Interview with Anderson.

147. Interview with Eggebo.

148. Interview with William Lane, Jr., Bison, S.Dak., 21 May 1991, Lane file.

149. Interview with Irene and Lee Kolb.

150. Interview with Eggebo.



A young Lois Eggebo perched on her father’s shoulders for this picture taken in the 1950s in front of her grandparents’ sod house. Charles and Lena Spangler adapted their original home over the years.

The proverbial insulation factor that elevated the sod house above others in the windy, sometimes bitterly cold Great Plains setting speaks less to the desirability of a lumber-rich frame house with modern insulation, plumbing, and electricity, than to the drawbacks of the other choice available for house building from the early 1900s through the 1930s—the flimsy shanty. “The term ‘house’ clearly implied a degree of permanency that the shanty did not have,” observed John N. Vogel, whose comment was not lost on sod house dwellers. These tarpapered shacks were cheap, small, unattractive box-like structures.¹⁵¹ Fred W. Peterson has argued that such a “cramped multipurpose space” resembled more substantial, larger, modern “balloon frame houses,” only in that they used “milled lumber joined with nails.”¹⁵² Emma Goerndt recalled that she lived in a “pretty poor shack” when she homesteaded her relinquished claim in 1914. “It was cold in the winter time and hot in the summer time,” she explained. “Most of those tar paper shacks were sodded up on the outside. To make them warmer. I know they were always after [her brother] George, ‘Come and do some sodding for us.’ And he’d go with his wagon and his plow. . . . I know he sodded a house up for his girlfriend.”¹⁵³

If sod surrounded the best of claim shacks, Emery Worm described the worst of such shanties, telling about one attempt to salvage an old claim shack covered with tarpaper. When he tore it apart he was taken aback, saying, “There wasn’t even inch boards.” A few two-by-fours and “kindling” were “all the good we got out of it.”¹⁵⁴ Mary Mackey’s father used a shack to make final proof on his homestead but built a sod house for his regular home.¹⁵⁵ Johnny Allendorf’s family lived in a structure made up of about “five different homestead shacks” puzzled together before his parents built their sod house following a fire that destroyed the shanty complex. He explained that when homesteaders left, those who stayed would “go get homestead shacks and throw them together”

151. Vogel, “Great Lakes Lumber,” p. 141.

152. Peterson, *Homes in the Heartland: Balloon Frame Farmhouses of the Upper Midwest, 1850–1920* (Lawrence: University Press of Kansas, 1992), pp. 54, 58.

153. Interview with Goerndt.

154. Interview with Emery Worm.

155. Interview with Mackey.



Like many tar-paper shacks, this one was partially sodded for extra insulation.

to use for housing. Some of these claim shanty houses, like soddies, said Allendorf, “stood until modern times,” or about the 1940s when townspeople began building updated homes.¹⁵⁶ Both a well-finished sod house and a conglomerated, pieced-together shanty house remained rudimentary first housing for settlers who had to persevere through the early decades of drought, recession, depression, and material scarcity.

The solid sod house and the flimsy tar-papered shack have been used as physical metaphors for homesteaders themselves, suggesting that those who intended to stay built soddies, while those who planned to prove up and leave built shacks. From the perspective of those who remained, the metaphor of staying power and perseverance—as opposed to too-quick departures—has a basis in history. According to

156. Interview with John Allendorf, 30 July 1990.

historian Paula M. Nelson, the people who rushed to western South Dakota tended to be either those who came to “partake of legend, . . . lighting only briefly on the land before returning to a modern world” having enjoyed a western experience and possibly profited from the sale of their land, or those who were “ambitious, hardworking people with great faith in their ability to establish a flourishing society of farms and towns.”¹⁵⁷ As folklorist Barbara Allen has suggested about high-desert Oregon homesteaders during the same period, these more serious South Dakota homesteaders may have seen themselves “in the vanguard of the new American agriculture as dry farmers.”¹⁵⁸

Local resident Oliver Green confirmed this view, saying that one “could almost tell somebody that was going to try to make a go of it and somebody that wasn’t. The ones that was just going to prove up, they just built a little old tar paper shack, dug a well, broke up five acres and that was it.”¹⁵⁹ Emma Goerndt recalled: “Most of them didn’t stay. They proved up and took what they wanted. Sometimes they left wonderful things. Whole barrels of pretty dishes. But it all got stolen. And then [others] stole the shacks. We got one ourselves. We made a coal house out of it.”¹⁶⁰ When Cornelies Van Den Berg started building sod houses starting in 1913, two years after the drought of 1910–1911, he recalled finding numerous abandoned shacks. The locals typically took lumber or windows to place in their sod houses. His family installed a floor in their house with wood from an abandoned claim shack. Green related that his grandfather, Joseph Byers, built a shed out of claim shacks, and his aunt’s claim shack became a granary and then a chicken house.¹⁶¹

Through these stories, Goerndt, Van Den Berg, Allendorf, Green, and nearly everyone who spoke of this history revealed another factor as to why some sod houses survived to modern times. The wares

157. Nelson, *After the West Was Won*, pp. xiv–xv. See also Robinson, *History of North Dakota*, p. 238.

158. Allen, *Homesteading the High Desert* (Salt Lake City: University of Utah Press, 1987), pp. 137–38.

159. Interview with Green.

160. Interview with Goerndt.

161. Interview of Cornelies Van Den Berg; interview with Green.

and material resources discarded by homesteaders who left the country increased the substance of the built environments of the farms and ranches that survived into the modern era. Settlers who stayed actually needed to increase their holdings, both land and lumber, in order to stay. The temporary fleet-footed homesteader from this perspective assisted those who remained. In a twist that speaks to the enduring value of lumber in the area and an ethic of resource reuse, Aldin Erikson knew exactly where the “real good floors” in his family sod house ended up: the fourteen-foot-long boards became a “new porch, on a new house.”¹⁶²

Finally, the generation who lived the prime of their lives from the 1910s to the 1940s in sod houses—through economic recessions, depressions, drought, agro-environmental modernization, and agribusiness incorporation—gradually added improvements that made their sod homes comfortable enough as they persisted. Looking toward retirement, Lizzie Bekken, who grew up in Butte County and met her husband Don (son of homesteader Tollef Bekken) while teaching in the area, recalled: “We always intended to build a better, bigger house. We didn’t intend to live in a sod hut all our life. But, well, my husband was 36 years old when we were married, and it seemed like no time at all until he was getting up there to 55 or 60 and that was a poor time to begin to build a new home because we still knew he had to retire and [we could] not live out there during our elderly years. So we never did buil[d] a new home.”¹⁶³

She and her husband also noticed that a modern home did not usually increase the value of a ranch operation upon sale; the land provided the primary value. Moreover, as ranches grew in size and adopted labor-saving machinery, the remaining population needed fewer houses. Judith Longwood recalled that her husband’s parents had planned their sod house to be temporary. “They were going to build a cement house up on the hill . . . they had the gravel up there and everything,” she stated. “This was in [19]26. The banks went broke. My father-in-law lost some money, too, and then he thought rather than to build a new

162. Interview with Aldin and Varna Erickson.

163. Interview with Lizzie Bekken, Newell, S.Dak., 27 July 1990, Bekken/Anderson file.

house he'd better see that his kids got an education." By the middle of the twentieth century, the Longwood soddie had been wired and fully modernized, the exterior walls cemented, and additions made. The demise of such a solid house was almost unfathomable to its owners. "I suppose eventually . . . it will fall down, but I don't know how long it will take. . . . It's weathered many a storm—many a wind storm."¹⁶⁴

164. Interview with Longwood.



Built as temporary housing during the homesteading era, the Longwood sod house went on to outlast most other sod structures in the area. The wooden support beams are clearly visible in the fully modernized kitchen.



Later additions and modern siding, along with electrical poles and satellite receivers, hide the Longwood house's origins as a sod structure.

As Fred Peterson has argued of agricultural operations and farm-houses generally, “Practicing frugality as a moral virtue, many large farm families chose to continue to live in small dwellings” and placed “architectural ambition in the proper context of the farm as a working enterprise where one ought to accomplish ‘first things first.’”¹⁶⁵ Even so, modernized sod homes grew quite comfortable. Mary Mackey’s home had stucco on the outside and paint on the inside, frame additions, and modern roofing. “A lot of people c[a]me in the house and didn’t know it was sod,” she said. Guests figured out her home was built of sod only if they happened to notice the thick window sills filled with flowers.¹⁶⁶ A combination of farm frugality, comforts already achieved, and a growing culture of the “predictably unpredictable” worked to preserve sod house structures in northwestern South Dakota throughout the twentieth century.

165. Peterson, *Homes in the Heartland*, p. 80.

166. Interview with Mackey.

Maintenance using new commercial tools, decorations, and construction materials, in part, allowed the next generation to keep many sod houses habitable for decades. Most sod house dwellers assessed the home's appearance and structural integrity every year. Inside plastering and outside stuccoing or patching occurred almost annually. While Mary Mackey's mother fixed up an oilcloth painted with calamine (a pink, green, blue, or yellow powder mixed with water) to hang on the interior sod walls, by the end of the twentieth century, Mary preferred semi-gloss oil paint that helped to seal the sod and could be easily washed. Gladys Jackson painted pictures of both the Ann Carr sod house and George Carr's sod house, where she grew up, depicting them with the stucco, shifting cracks, and repairs that had looked to her as a child like a spider web. Martin Anderson had a regular fall routine of checking for cracks and using a caulking material for exteriors. When cracks became bad, such as the time lightning struck his house, he filled them with cement. He also discovered that mice would not chew on tinfoil, so he advised it as the best filler to stuff into holes in sod walls. Juanita Lenerville, who raised goats on her family homestead in the late twentieth century, recalled how every fall she patched mouse holes and cracks with cement.¹⁶⁷

Besides problems with the roof, the main structural defects mentioned by descendants who maintained sod houses well into the twentieth century involved stability, in particular, the effects of decades of wall weight on window and door apertures. While light-colored plaster or cemented window and door wells increased reflective light in houses, such stucco also added strength and stopped cracks from developing into holes that might result in larger imbalances and a break, usually at the corners. Speaking specifically about window and door frames, Oliver Green said that one needed to redo the plaster every couple of years. A mix of concrete and mud, he estimated, might be good for up to five winters. Lois Eggebo, for example, explained that her grandmother's sod house began to deteriorate after the window frame rotted and collapsed, allowing factors such as erosion from weather or rubbing from stray cattle to speed the process.¹⁶⁸

167. *Ibid.*; interviews with Jackson, Anderson, Lenerville.

168. Interviews with Green, Eggebo.



Cracking stucco, as seen on the Bekken sod house, meant continual patching and other maintenance chores for owners.



The deterioration of sod structures can be accelerated by numerous factors, including damage caused by cattle rubbing against the building's corners.

Maintenance varied, according to Green, “depending on how much rain you got and how cold it was.” If a sod house was left standing without occupation, “that’s when they go to pieces quick, ’cause there’s no heat inside to dry them out . . . and they just start deteriorating.” Furthermore, Green explained, once a soddie had stood for ten years or so, “they’ll start settling crooked. . . . I’ve seen a lot of them that had to be braced for several years so that they would settle back the other way.” In one particular instance, “The north end started to go out and then [my uncle] got some big poles and they jacked it back up there as tight as they could and then every once in a while, they’d tighten them more. That pushed back pretty good. After settling the other way, it straightened up.” Green added, “Frost and moisture don’t dry out as fast and the frost freezes and then it heaves—just like your ground.”¹⁶⁹ Of the sod house her parents built, Mary Mackey explained that in a three-day rain the walls take on moisture to the extent that it can be felt within the house. The walls “draw it in,” she said, but “when it gets hot, or dried . . . again it’s fine.” She continued to watch for any sway at the top of the walls as signs of a larger problem developing, even though she knew that her father had placed iron rods into the walls for stability.¹⁷⁰

Several former sod house dwellers recalled leaving when a wall fell out. For a short time after they married in the 1930s, Bob and Faye Week lived in the sod house his mother had built on her homestead. As they told the story, “Well, we were sitting there on Sunday and visiting” with a sister and brother-in-law, when “*Kerplunk!* . . . the wall went out.” There had been no warning of the impending collapse, which left a hole the size of a large piano. The north wall “had been leaning for many years,” Bob explained, and was braced in two places outside. Unfortunately, the brace poles were situated too far apart and allowed the section in between to collapse. His brother-in-law “about died laughing” over the incident, Bob remembered.¹⁷¹

As Oliver Green said of sod houses, “There’s a lot of upkeep going

169. Interview with Green.

170. Interview with Mackey.

171. Interview with Bob and Faye Week, Prairie City, S.Dak., 23 May 1991, Week file.



Sagging or bowed walls and the need for bracing plagued many soddies, as seen in this photograph of students gathered in front of their sod schoolhouse.

on. I mean you've got to keep working with them. You've got to just watch them all the time. There's a lot of work to it. . . . That's the big reason that [the sod house] isn't any longer built."¹⁷² The solid soddie stood many residents of northwestern South Dakota in good stead for decades longer than their builders had planned. In a region where the climate and economy often proved harsh, some of those who stayed saved their limited resources to deal with the "predictably unpredictable" and made do with their sod homes as long as possible. By the end of the twentieth century, however, all but a few of the area's sod houses had met their demise. As Herman Van Den Berg looked at a photograph of ducks swimming in a pond on his property, he summed up the practical philosophy of long-time area residents: "That's the ducks in the hole where the sod house was," he said. "It crumbles down. It falls over. Then you leave it. And you get yourself some ducks."¹⁷³

172. Interview with Green.

173. Interview with Herman and Ruby Van Den Berg, Prairie City, S.Dak., 25 May 1991, Van Den Berg file.

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On the cover: Built in 1907 and listed on the National Register of Historic Places, the Ann M. Carr sod house in Bison, South Dakota, served as both a residence and the town's first post office. In this issue, Molly P. Rozum details the ways in which homesteaders in northwestern South Dakota constructed buildings with the materials at hand and, in some cases, adapted and used them for decades.

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