From New Sweden in America, C. E. Hoffecker Ed. 1995 With Permission Associated University Presses

The Material Cultural Legacy of New Sweden on the American Frontier

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The evidence I will provide concerning the legacy of New Sweden on the American backwoods frontier is necessarily out of context, since it is drawn piecemeal from the book I wrote with Professor Matti Kaups of the University of Minnesota at Duluth.[1] I am unable in the space provided here to develop adequately our theses or to present fully the evidence. As a result my remarks may seem more provocative than convincing.

In brief, our theses are as follows: first, we propose that the cultural legacy of New Sweden was greatest on the American backwoods frontier, rather than in the more durable secondary postpioneer settlement phase. Second, we are convinced that the most influential citizens of New Sweden, the ones most active in transmitting its influence to the eastern woodland frontier at large, were Savo-Karelian Finns rather than Swedes.[2] Finns of mixed Savoan and Karelian background, coming mainly from Värmland Province in interior Sweden, formed a very substantial part of the Delaware colony's population, dominating certain settlements and perhaps even forming a majority of the inhabitants following the Dutch takeover in 1655 (fig. 1).

In our book we offer a cultural ecological explanation of how the small band of Finns could have been so influential in American backwoods pioneer culture and why larger, later-arriving immigrant groups, in particular the Scotch-Irish, adopted so many Finnish practices. We suggest that the Savo-Karelian Finnish subculture of northern Europe was primed for success on the forest frontier of North America. The Savo-Karelians had been a people engaged in agricultural forest colonization for generations before their arrival in the Delaware colony and had accomplished an explosive expansion from the Lake Ladoga area that brought them even into interior Sweden by 1600 (fig. 2). They already possessed, upon arrival in America, many of the skills and techniques later associated with the backwoods pioneers—axmanship, a crude form of notched-log carpentry, hunting prowess, open-range cattle and hog

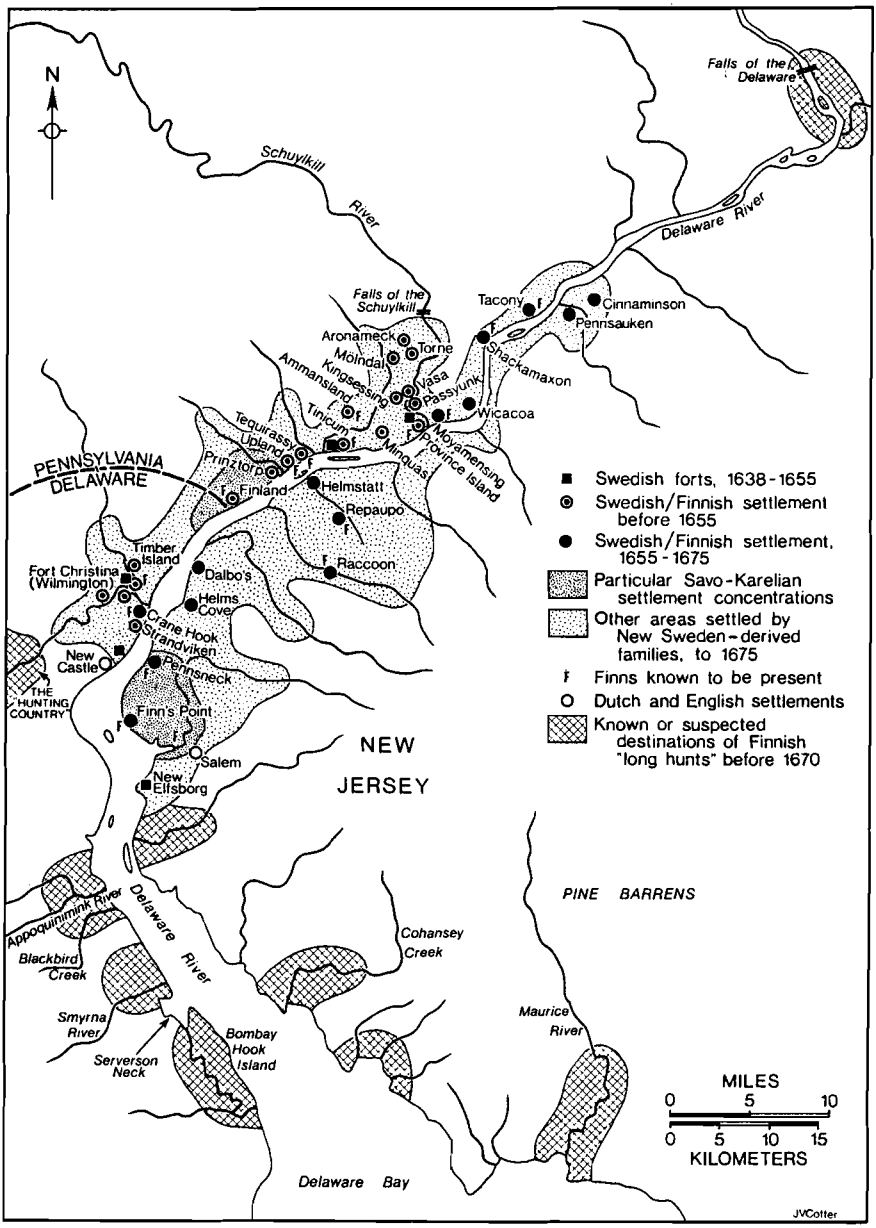

Fig. 1. Settlement of the Lower Delaware, 1638–75.

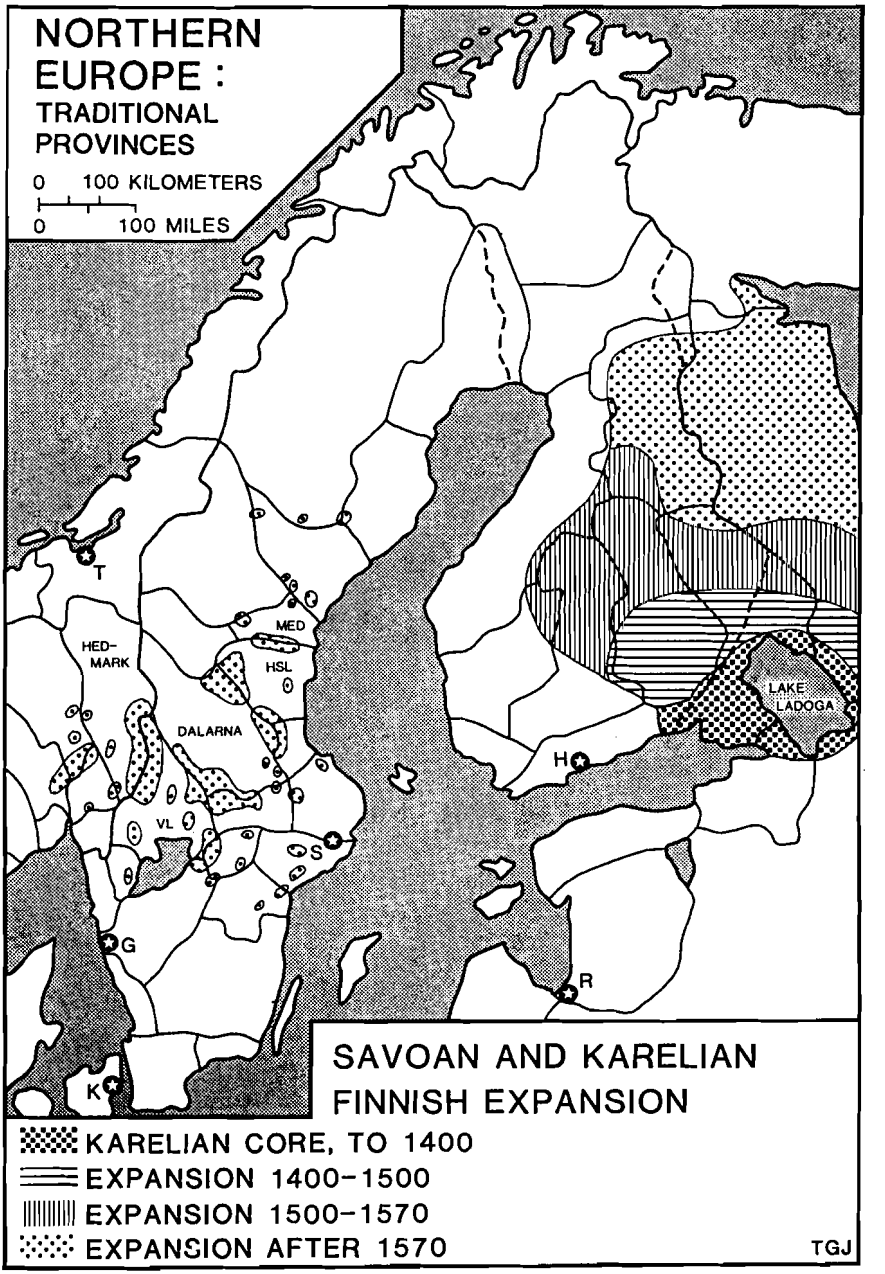

Fig. 2. Key: G = Göteborg, H = Helsinki, HSL = Hälsingland, K = København, MED = Medelpad, R = Riga, S = Stockholm, T = Trondheim, VL = Värmland.

herding, and slash-and-burn grain farming. These Finns also had used split-rail fences and the long rifle; moreover they had a seemingly compulsive drive to be on the move.

We further propose that, once settled in New Sweden, the Finns freely adopted from the local Delaware Indians, a people with whom they enjoyed very cordial relations, certain other items useful in frontier colonization, most notably corn. As early as 1660 or 1670, long before the arrival of the Scotch-Irish and other groups that would help populate the frontier, a hybrid Fenno-Indian backwoods pioneering culture had already formed along the Delaware. It was a way of life splendidly adapted to the task of forest colonization, whereas the later-arriving groups lacked the requisite skills.

Five examples of American backwoods frontier material culture, we believe, constitute diagnostic evidence of Finnish influence. An appropriate point to begin is log carpentry, one of the adaptive keys to frontier occupancy.[3] One must realize, at the outset, that frontier carpentry was crude. Do not seek surviving examples of it in the well-crafted, hewn-log houses of the secondary, postpioneer settlement phase in the eastern states. Its vestiges remain largely in certain farm outbuildings, and only beyond the Mississippi, especially in the Rocky Mountains, can numerous dwellings displaying pioneer carpentry be found. Similarly, in northern Europe do not expect to find the frontier Savo-Karelian carpentry in most of the Swedish or Finnish outdoor folk museums, where fine craftsmanship is emphasized, but rather look for it in the interior rural districts.

One type of log-corner notching that especially indicates Finnish influence is that identified in the literature of folk carpentry as V notching.[4] In all of Europe, only one confined area has log structures that are V notched (fig. 3). The area straddles the Swedish-Norwegian border, coinciding in part with a major Savo-Karelian Finnish settlement district in Värmland and Hedmark provinces. The notch, apparently of Norwegian origin, evolved slowly from a medieval prototype and was eventually adopted by Finnish settlers after their arrival in Sweden (fig. 4). It occurs in both round-log and hewn-log subtypes in northern Europe as well as America. Not one shred of evidence links this notch to Germany, and our field research in all German areas of Europe where log construction occurs has failed to find a single specimen that resembles V notching. In addition, the "lower Swedish cabin," a round-log V-notched dwelling in Clifton Heights, Pennsylvania, was recently dismantled and subjected to dendrochronology, yielding a date of 1697. That is more than a decade before log-building Germans began entering Pennsylvania. Additional evidence of New Sweden's influence on log carpentry is provided by the recently published research demonstrating the northern European origin of American "diamond" notching.[5]

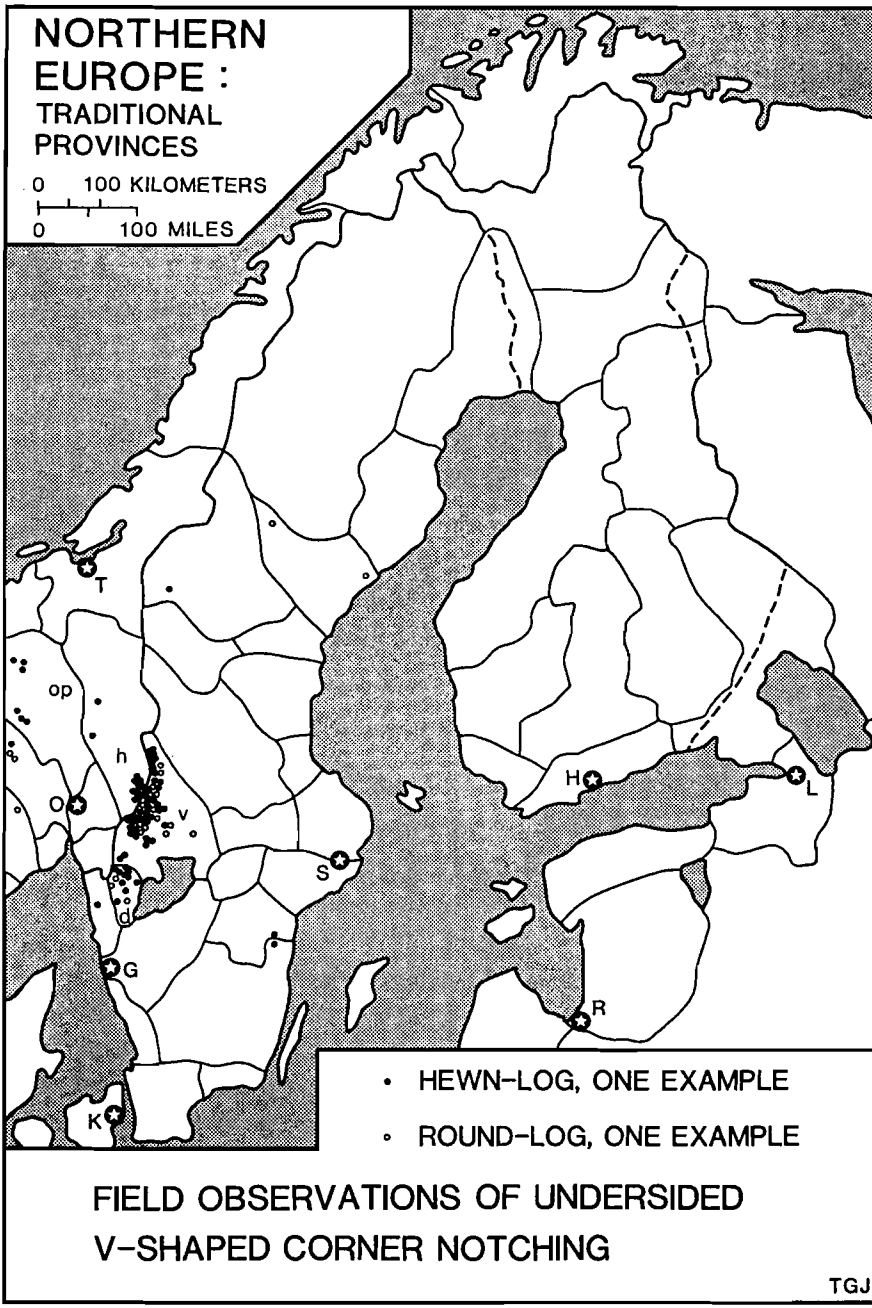

Fig. 3. *d* = Dalsland, *G* = Göteborg, *H* = Helsinki, *h* = Hedmark, *K* = København, *L* = Leningrad, *O* = Oslo, *op* = Oppland, *R* = Riga, *S* = Stockholm, *T* = Trondheim. For sources, see Jordan, Kaups, and Lieffort, "New Evidence," p. 28 (see n. 4).

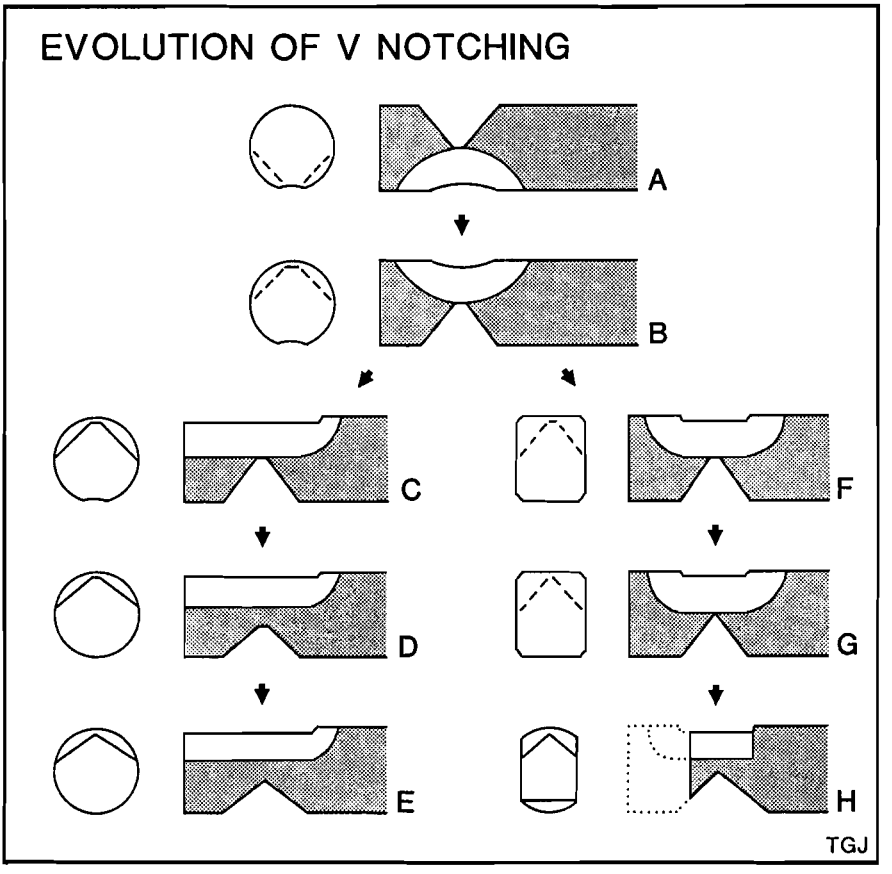

Fig. 4. Key: *A* = medieval Norwegian from Gudbrandsdalen; *B* = late medieval Norwegian; *C* = late medieval Norwegian from Hallingdalen; *D* = colonial Pennsylvanian, from Lower Swedish cabin at Clifton Heights; *E* = American, ubiquitous; *F* = Finnish structures in Värmland and Hedmark, eighteenth and later centuries; *G* = Värmland, from Eda area near Arvika; *H* = American, ubiquitous.

A second material example of Finnish influence in pioneer America comes from roof construction. Both backwoods American and Savo-Karelian Finnish log structures had low-pitched ridgepole-and-purlin roofs. That is, gables, in common with lower parts of the wall, consisted of logs that were notched into a ridgepole and parallel purlins, also called rib poles, that ran the length of the structures from gable to gable and bore the weight of a highly distinctive roofing material. Clapboards three to four feet long were placed loosely on the purlins. The lowest course of these boards rested against a "butting board," which was usually

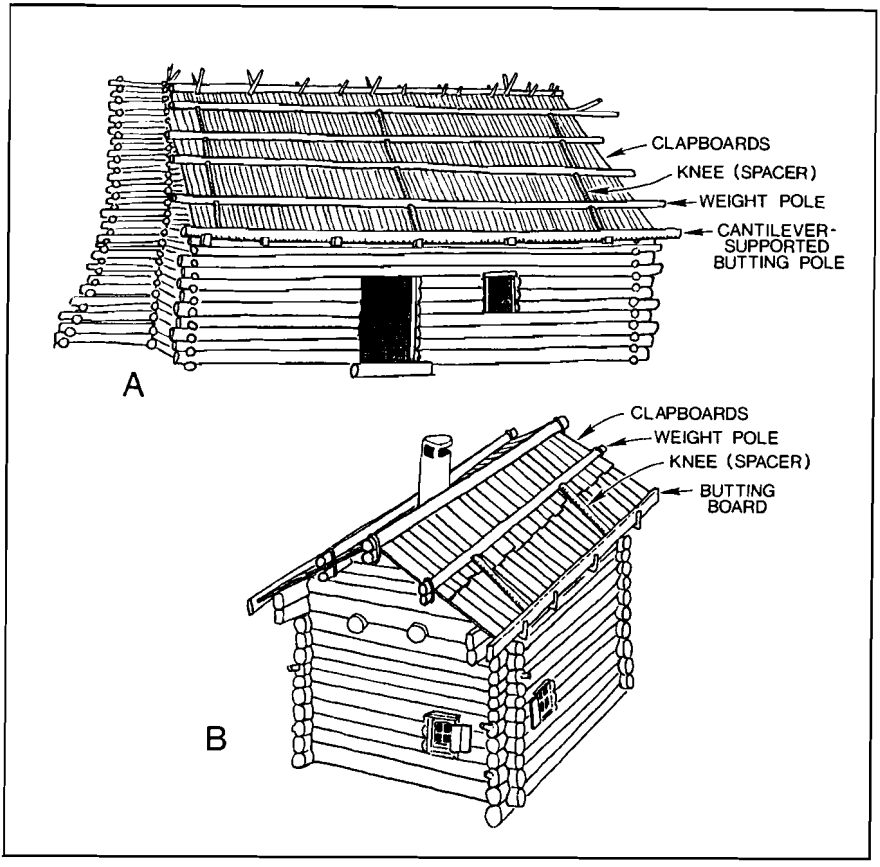

Fig. 5. Key: *A* = American backwoods cabin with weightpole-knee-butting board roof, from a 1791 sketch probably in frontier Georgia; *B* = house from Karelian isthmus, now at the Seurasaari open-air museum in Helsinki, also with a weight-pole-knee-butting board roof. *Sources*: (A) John R. Swanton, *Indians of the Southeastern United States*, Bureau of American Ethnology, Bulletin No. 137 (Washington, D.C.: GPO, 1946), pl. 58; (B) Niilo Valonen, *Zur Geschichte der finnischen Wohnstuben*, no. 133 (Helsinki: Suomalais-ugrilaisen seuran toimituksia, 1963), 45.

notched into cantilevered logs projecting from the base of the gable (fig. 5). The loose clapboards were held down by log "weight poles" that lay directly above the purlins. They were kept from rolling down the roof slope by short pieces of heartwood, called "knees," that rested perpendicularly against the butting board. A second course of clapboards overlapped the first, in the manner of shingles, and a second tier of knees supported another weight pole. At the roof ridge, clapboards on the

windward side projected by six inches or more beyond the crest, a practice called "capping." Such roofs, essentially identical in interior Finland and frontier America, possess the adaptive advantage of requiring no nails in construction.[6] So unusual a carpentry feature is most unlikely to have been independently invented, providing well-nigh irrefutable evidence of the cultural influence of New Sweden on the American frontier.

The next two examples of Finnish frontier influence come from folk architecture. Pioneer backwoodsmen applied log construction to a small number of interchangeable floor plans of single- and double-pen size (fig. 6). In this frontier folk architecture, houses or barns could easily be enlarged from one log unit to two, and an original house was often demoted to a barn, kitchen, or smokehouse. This interchangeability of structures minimized the number of buildings that had to be erected, an adaptive advantage on the frontier, where labor was in short supply. Expansion to double-pen size was done in such a way as to leave a roofed-over open space between the two log units, an adaptive practice that represented the most labor-efficient way to enlarge, since it avoided the problem of splicing logs and permitted the customary use of skids to raise the timbers into place.

The double-pen dwelling with open central passage is the familiar American "dogtrot" cabin of the frontier. We propose that the dogtrot plan, too, reached America with the Delaware Finns.[7] The Savo-Karelians, in common with American pioneers, possessed a small number of single- and double-unit log floor plans that were interchangeable (fig. 7). Duplicating the American pattern, the backwoods Finns of northern Europe often lived in open-passage double-pen houses that any American backwoodsman would have recognized as a dogtrot, and both groups also built double-crib barns with open runways in the center. In pioneer American and Savo-Karelian Finnish cultures alike, enlargement to dogtrot size was considered a status symbol and provided room for the abundant children of a young, forest-pioneering people. Even the methods of enlargement were identical in the two cultures, for both Finnish and American builders left the ridgepole and purlins of the original single-pen cabin projecting as cantilevered beams of seven to ten feet long on one gable end. These beams provided roof supports for the dogtrot hall after enlargement, but formed an awkward-looking protuberance as long as the cabin remained of one-room size.

In other words, the cultural, architectural, and ecological context of the dogtrot plan was very similar in backwoods America and the Savo-Karelian hinterland of northern Europe. The plan possessed adaptive value in both areas, principally through labor minimization, and in each area the dogtrot declined in post pioneer times, when the open passages were enclosed as halls. Relevant to our thesis is the fact that the oldest surviving

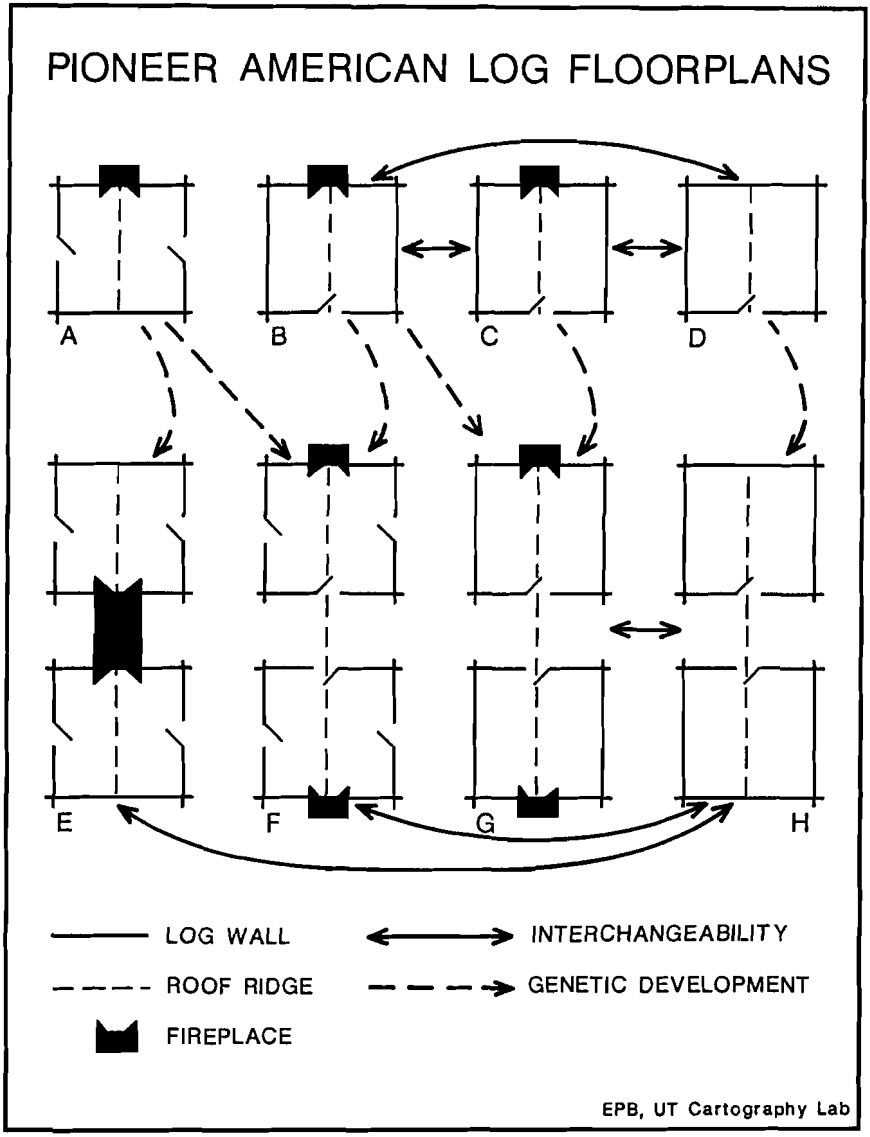

Fig. 6. Key: *A* = single-pen cabin, English plan; *B* = single-pen cabin, Finnish plan; C = kitchen; *D* = single-crib barn; *E* = saddlebag double-pen cabin; *F* = dogtrot double-pen cabin with British eave doors; *G* = dogtrot cabin with only Finnish doors; *H* = double-crib barn.

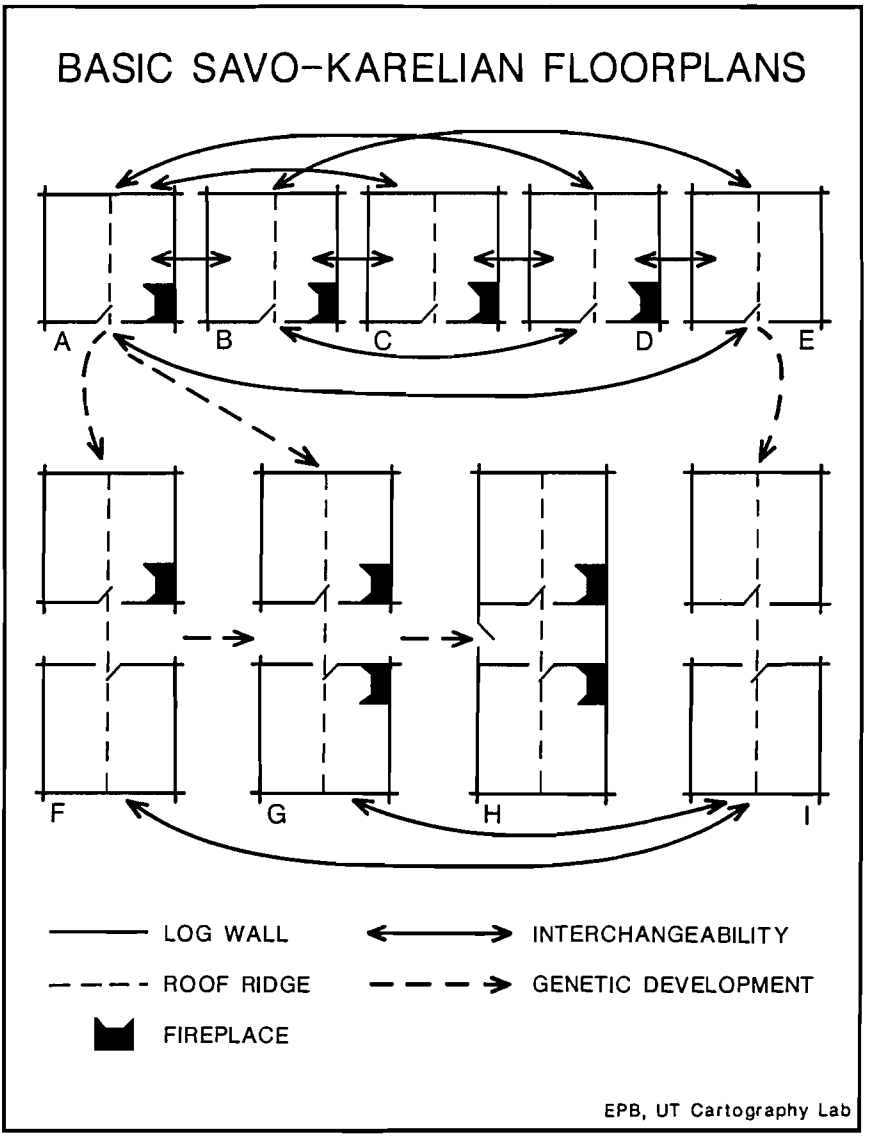

Fig. 7. Key: A = single-pen cabin; B = sauna; C = kitchen; D = grain-drying crib; E = single-crib granary or hayshed; F and G = double-pen house similar to "dog-trot" plan; H = double-pen house with enclosed hall; I = double-crib hayshed.

dogtrot dwelling in America, reputedly dating to 1745, is the Morton House at Prospect Park, Pennsylvania, within the territorial bounds of what had earlier been New Sweden. The builders of this house, originally named Mårtensson, are known to have been a Finnish family.[8]

A second element of pioneer American folk architecture that reveals Savo-Karelian influence is the log hunter's shanty. These crude structures, none of which survive today in America, consisted of three log walls covered by a single-pitch, lean-to roof (fig. 8). The fourth, tallest

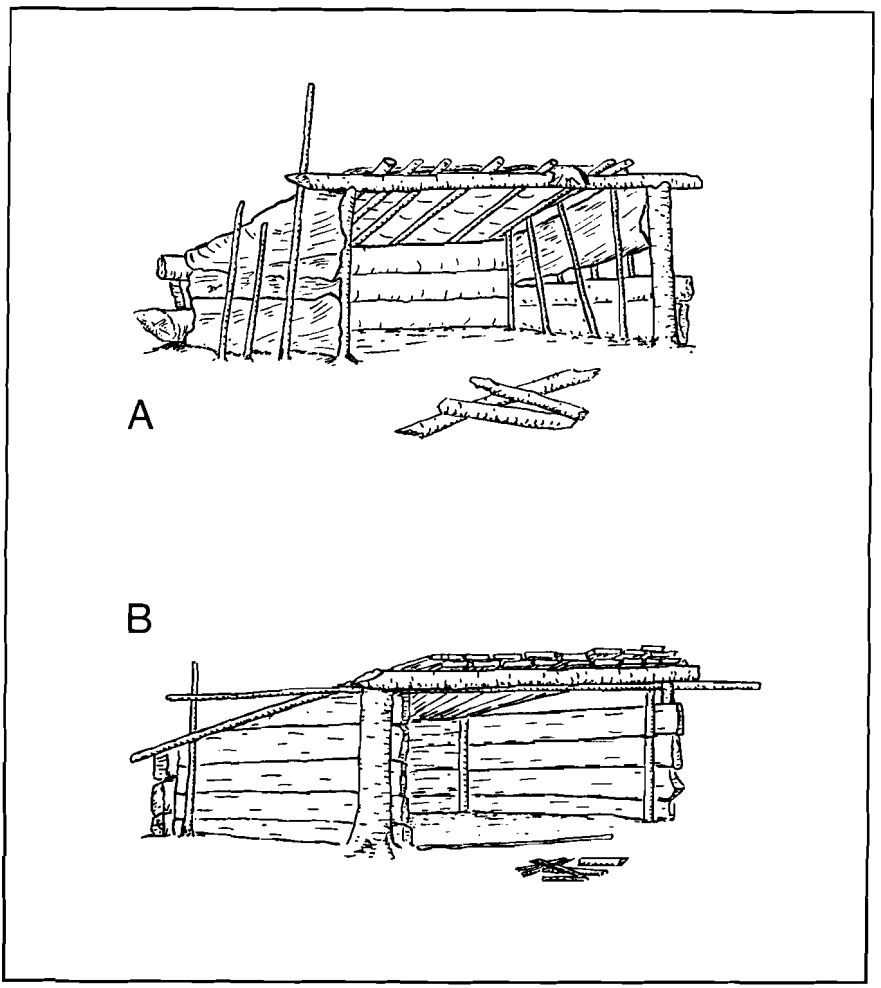

Fig. 8. Hunter's shanty, Savo-Karelian area in northern Europe. A = Repola in Russian Karelia; B = Pielisjärvi in Finnish northern Karelia. Source: Sirelius, "Über die primitiven Wohnungen," vol. 9 (1909), 19.

side of the shanty, facing the campfire, remained completely open. Variously called a "half-faced cabin," "three-faced camp," "open log cabin," or "open-faced shanty," these shelters remained surprisingly warm on winter hunts. One backwoods hunter in late-eighteenth-century western Pennsylvania described how he "cut some small trees and put up three sides of a small cabin, leaving the front open, having our fire on the outside." His shanty measured nine or ten feet square, and most were not over three or four feet tall at the rear.[9] A more detailed description of shanty-building from the Virginia backcountry frontier mentioned that the rear wall sometimes consisted of a single large log, and at a distance of eight to ten feet from it two pairs of "stakes were set in the ground a few inches apart to receive the ends of the poles for the sides of the camp." Above, "the whole slope of the roof was from the front to the back" and made of "slabs, skins, or ... the bark of hickory or ash trees." To complete the shanty, "the cracks between the logs were filled with moss."[10] In addition to serving hunters, the frontier log shanty was also used by some pioneers as a first crude dwelling at a new settlement site, which was a logical development since the backwoods people often converted their former hunting grounds into farms.

The precise prototype of the American hunter's shanty, even to the last detail, occurred among the Savo-Karelian Finns in northern Europe (see fig. 8).[11] Even the moss chinking was the same, and back country Finns used their shanties for the identical purposes as the American pioneers. An ecological analysis of the structure helps explain why, once introduced by the New Sweden settlers, the Finnish hunter's shanty would have been acceptable to the Scotch-Irish and other groups. It benefits from the principle known to physicists as the "heat-reflector oven," in which the campfire's warmth is reflected downward from the underside of the single-pitch roof and trapped. This natural heating efficiency lent it an ecological advantage on the winter hunt.

The final example of Finnish-influenced items of pioneer American material culture is a fence type. Enclosure of newly fired clearings by pioneers was essential to protect the fields from open-range livestock, and fences were built as a normal part of the clearing process. Medium-sized trees suitable for fencing material were spared in the burning of the clearing, cut into suitable lengths, and dragged to the edge of the field. There they were usually split into "rails" with wedges by using the blunt side of the ax as a mallet. Depending upon the diameter of the logs, they were split into halves, fourths, or eighths, and about eight hundred rails were needed to fence an acre. Sometimes, though, whole unsplit logs from small trees were used for fencing.

The favored and almost universal style for backwoods American field enclosures was the famous "worm" or "snake" fence, which consisted of

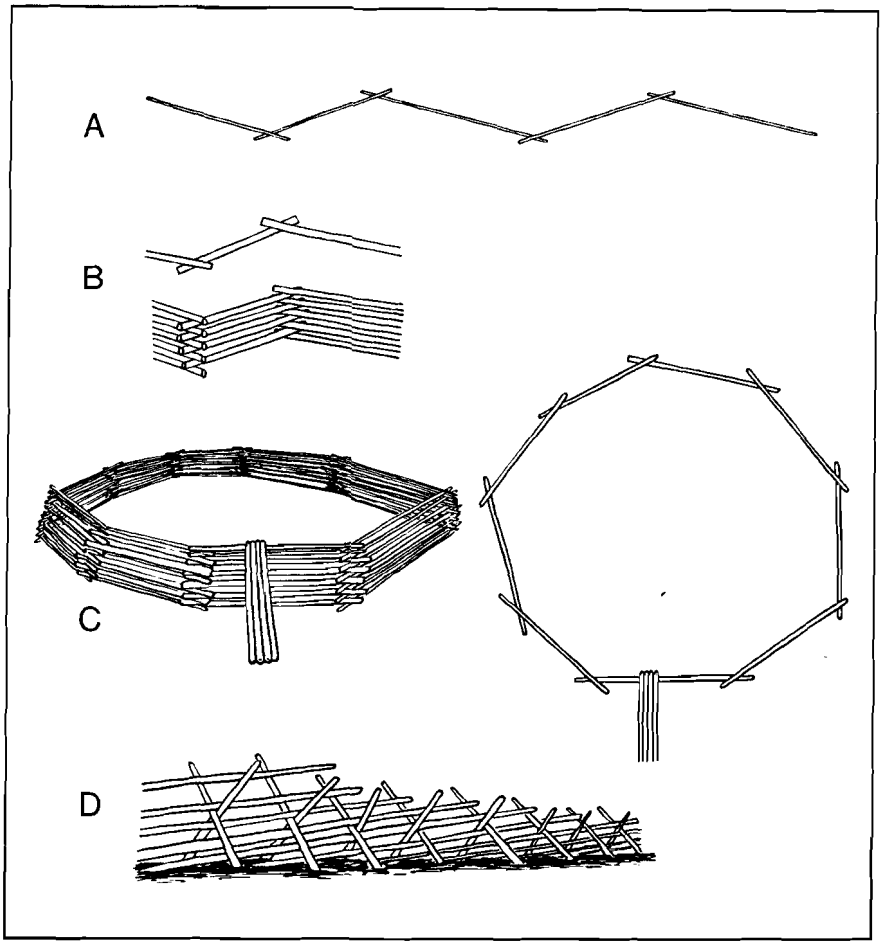

Fig. 9. "Portable" Fences, Scandinavia and North America. Key: *A* = traditional type of portable worm fence consisting of round notched logs, from Gräsmark, a Savo-Karelian Finnish parish in Värmland Province, Sweden, sketched over fifty years ago from memory; *B* = worm fence in Sweden, most common in Swedish Lappland, labeled type 20c in a Nordiska museet survey; *C* = worm fence reindeer corral, Inari area, Finnish Lapland; *D* = stake-and-ridered Savo-Karelian fence from a clearing in Pieksämäki area, Savo Province, Finland, of the slanted-rail type known in Pennsylvania as a "Swede" or "buck" fence. *Sources*: (A and B) see n. 17; (C) Itkonen item in n. 19; (D) Grotenfelt item in n. 19 and Stevenson W. Fletcher, *Pennsylvania Agriculture and Country Life* (Harrisburg: Pennsylvania Historical and Museum Commission, 1950), 85.

a zigzag stacking of rails or logs, in panels usually six to seven rails high and meeting at an angle of about 60 degrees (fig. 9).[12] No posts were required since the worm fence gained it stability from the tripod principle. The simpler type also contained no lateral supports, and depended only on gravity for survival. To add strength many pioneers placed two diagonal stakes at each joint, set against the ground at about a 45-degree angle, leaning against the top rail of the fence and crisscrossed in an X-shape. Then an additional rail or two, called "riders," were placed atop the crossed stakes to lock the joining. The resulting worm fence, called a "stake-and-rider" type, could resist the shoving pressure of animals and high wind much better than the simpler variety. If round, unsplit logs were used, a slight notching provided the needed lateral strength at the joints. Wherever the American pioneers went, the usual kind of enclosure surrounding their fields was this "rough zigzag log fence."[13]

A crude livestock corral was also built using the worm fence principle. Instead of zigzagging at each joint, the rails or logs were laid in such a way as to describe an arc, forming a circle or, more accurately, a polygonal enclosure (fig. 9*C*). Such log corrals—as well as round-log zigzagged worm pasture fences—can still be seen today on ranches in different parts of the Rocky Mountains, an area rich in pioneer material culture.

The adaptive advantages of worm fencing, which explained its popularity on the frontier, were several. It was made of an abundant raw material, required no mortising, hardware, or post holes, and could be erected quickly and cheaply with minimal labor in comparison to other fence types. No gates were needed since the field was entered by pulling down a corner of the fence. The rails could easily be disassembled and taken to a new clearing when a field was abandoned. Following a harvest the worm fence could be thrown down in several places to allow stock to forage on straw, husks, and weeds. Rail fences were not very durable, however, and had to be rebuilt on an average of once every twelve to fifteen years, but that hardly concerned the mobile backwoodsman.

The origin of the worm fence has long been debated. Some historians, completely without evidence, wrongly attributed it to the American Indian, overlooking the fact that the natives lacked the tools to cut tree trunks to the proper lengths or split them into rails, and ignoring early accounts describing Indian corn fields in the eastern seaboard area as unfenced on all sides. Others have fallen back on the tired, if convenient, notion that pioneer innovation explains the worm fence. Even the original regional cultural affiliation has been unclear, confused by the popular term *Virginia worm fence*.[14] In fact, documentary evidence points very clearly to a Delaware Valley origin since the earliest-known reference to a worm fence was on Alloway's Creek near Salem, New Jersey, in 1685.[15]

Alloway's Creek and Salem are located only a few scant miles from the

notable seventeenth-century concentration of Savo-Karelians in the settlement known as Finns Point (fig. 1). We propose that the worm fence, in both its zigzag and polygon configurations, was implanted in America by the Finns.[16] Indeed, we must now confess that the fences illustrated in figure 9, fences that would instantly be recognized by an American pioneer, were all sketched in Finnish areas of northern Europe.

In the Savo-Karelian districts of Värmland and Hedmark, archaeological research has occasionally revealed a zigzag tracing around the perimeter of long-abandoned grain fields. A field survey of traditional fence types undertaken by Nordiska Museet staff in Sweden earlier in this century yielded a respondent from a Finnish parish in Värmland who recalled that zigzag enclosures were formerly used there in cases where the fence was frequently relocated, as in shifting cultivation and snow baffles. The respondent's sketch leaves no doubt that a worm fence was being described (fig. 9*A*), and as a result a detailed drawing of such an enclosure appeared in the questionnaire subsequently developed by the museum staff (fig. 9*B*).[17] Worm fences have been photographed in Swedish Lappland, though none apparently survive in Savo-Karelian settled areas.[18]

The ultimate origin of the worm fence and corral is apparently to be found among the Lapps, a people for centuries in frequent contact with the kindred Savo-Karelian Finns. The Lapps long used the zigzag log fence to direct game during hunts, and they still today build the polygonal corrals for their reindeer (fig. 9*C*). Stakes and riders, on the other hand, appear to be of Savo-Karelian origin (fig. 9*D*).[19] Put briefly, every element of the form of the American backwoods worm fence is abundantly present in the Finnish tradition of northern Europe.

These five features of material culture are evidence of a Finnish contribution, by way of the New Sweden colony, to American frontier life. The features—V notching, the weight-pole–knee-butting board roof, the dogtrot dwelling plan, the hunter's shanty, and the worm fence—may be regarded as diagnostic, since they occurred only in northern Europe and the American frontier. One must, in viewing the evidence, either accept the notion of Finnish influence or postulate a most unlikely series of independent inventions. If one accepts the Finnish origin of just one American feature—the weight-pole–knee-butting board roof, for example—then the likelihood of Finnish influence in other aspects of the American forest pioneering system cannot be dismissed. When five diagnostic material traits of northern European origin are accepted, then reason demands approval of a rather considerable Fenno-Scandian role in the shaping of American frontier culture. A single Finnish-like trait in backwoods America could be dismissed as chance independent invention, but complexes of multiple, interrelated, diagnostic northern European traits,

such as exist in carpentry, architecture, and fence-building, simply cannot be cast aside rationally.

How did the Finns achieve such importance? Cultural ecology provides the answer. The Finnish complex of preadapted traits diffused to a larger American population simply because it worked far better than any competing system. If a Finnish trait possessed no adaptive value that made pioneering easier, it did not survive, as was the case with the Finnish language and sauna, neither of which spread far beyond the banks of the Delaware. In such matters of taste, including speech, music, and folklore, the heritage of the British highland majority on the American frontier prevailed. Indeed, we present in our book evidence of Celtic, Dutch, English, and German influence, as well as American Indian contributions. By no means do we propose that the backwoods culture of the United States was exclusively Finnish. We do, however, feel that our evidence demands that an important Finnish contribution be acknowledged. Heretofore students of the frontier have, by and large, denied that contribution.[20]

What, in the final analysis, was the legacy of New Sweden? I say you should seek it in the outrageously successful forest pioneering culture that permitted the United States to deal in Manifest Destiny and to become a transcontinental nation rather than remaining a littoral state clinging to the Atlantic. I say seek it among Finns, not Swedes.

NOTES

1. Terry G. Jordan and Matti Kaups, *The American Backwoods Frontier: An Ethnic and Ecological Interpretation* (Baltimore: Johns Hopkins University Press, 1989).
2. Terry G. Jordan, "Evolution of American Backwoods Pioneer Culture: The Role of the Delaware Finns," in *Mississippi's Piney Woods: A Human Perspective*, ed. Noel Polk (Jackson: University Press of Mississippi, 1986), 25–39.
3. Terry G. Jordan, *American Log Buildings: An Old World Heritage* (Chapel Hill: University of North Carolina Press, 1985), 41–83.
4. For a complete treatment of this subject see Terry G. Jordan, Matti Kaups, and Richard M. Lieffort, "New Evidence on the European Origin of Pennsylvanian V Notching," *Pennsylvania Folklife* 36 (1986): 20–31.
5. Terry G. Jordan, Matti Kaups, and Richard M. Lieffort, "Diamond Notching in America and Europe," *Pennsylvania Folklife* 36 (1986): 70–78.
6. For surviving examples of the weight-pole–knee-butting board roof in Finland and America, see the Abraham Lincoln birth cabin at Hodgenville, Kentucky, and exhibit number 20, from the Karelian isthmus, in the Seurasaari outdoor folk museum in Helsinki.
7. For a much fuller discussion of the dogtrot plan in America see Terry G.

Jordan and Matti Kaups, "Folk Architecture in Cultural and Ecological Context," *Geographical Review* 77 (1987): 52–75.

8. C. A. Weslager, *The Log Cabin in America From Pioneer Days to the Present* (New Brunswick, N.J.: Rutgers University Press, 1969), 166–67; Akseli Järnefelt-Rauanheimo, "Rautalammin lahja Amerikalle," *Kansanvalistusseura kalenteri* (1921): 36–40.
9. John W. Harpster, ed., *Pen Pictures of Early Western Pennsylvania* (Pittsburgh: University of Pittsburgh Press, 1938), 223–24.
10. Joseph Doddridge, *Notes, on the Settlement and Indian Wars, of the Western Parts of Virginia and Pennsylvania* (Wellsburgh, Va.: The Gazette, 1824), 124–25.
11. U. T. Sirelius, "Über die primitiven Wohnungen der finnischen und obugrischen Völker," *Finnisch-ugrische Forschungen: Zeitschrift für finnisch-ugrische Sprach- und Volkskunde* 8 (1908): 8, 12, 15–19, 28; 9 (1909): 17–19; Albert Hämäläinen, *Bostads- och byggnadsskick hos skogsfinnarna i Mellan-Skandinavien*, no. 23 (Stockholm: Nordiska museets handlingar, 1945): 25–27.
12. Mamie Meredith, "The Nomenclature of American Pioneer Fences," *Southern Folklore Quarterly* 15 (1951): 135–47; U.S. Department of Agriculture, "Statistics of Fences in the United States," *Report of the Commissioner of Agriculture for the Year 1871* (Washington, D.C.: GPO, 1872), 500, 504.
13. F. A. Michaux, *Travels to the West of the Allegheny Mountains* (London: Crosby & Co., 1805), 58; Leslie Hewes, "Early Fencing on the Western Margin of the Prairie," *Nebraska History* 63 (1982): 301–5.
14. John R. Stilgoe, *Common Landscapes of America, 1580 to 1845* (New Haven: Yale University Press, 1982), 190; Vera T. Via, "The Old Rail Fence," *Virginia Cavalcade* 12 (Summer 1962): 33–40; Wilbur Zelinsky, "Walls and Fences," *Landscape* 8 (Spring 1959): 15; Meredith, "Nomenclature of American Pioneer Fences," 144.
15. H. F. Raup, "The Fence in the Cultural Landscape," *Western Folklore* 6 (1947): 3. Raup, however, mistook Salem, New Jersey, for Salem, Massachusetts.
16. Amandus Johnson was the first to propose a northern European origin for the worm fence; see his "Sweden Gave Americans the Rail Fence," *American Swedish Monthly* 49 (June 1955): 6–7, 29.
17. "Etnologiska undersökningen" files, "Hågnader," vol. 1 (1927–45), 157; and vol. 2 (1927–37), fig. 20*C* preceding p. 1, Nordiska museet arkiv, Stockholm.
18. Photograph Collection, photos no. 424.K.ah. and 424.K.ak, Nordiska museet arkiv, Stockholm.
19. T. I. Itkonen, *Suomen Lappalaiset vuoteen 1945* (Porvoo and Helsinki: Werner Söderström, 1948), 2:64; Gösta Grotenfelt, *Det primitiva jordbrukets metoder i Finland under den historiska tiden* (Helsinki: Simeli, 1899), 183.
20. See, for example, Henry Glassie, "Eighteenth-Century Cultural Process in Delaware Valley Folk Building," *Winterthur Portfolio* 7 (1972): 49.