

Oak pegs used to secure sway braces on barn beams. H.G. Enns house-barn, Reinland, Manitoba.

The Vernacular Architecture of Two Ethnic Groups in Manitoba A Comparative Study

by Gwendolyn Dowsett

Within the past few decades an increasing interest has been shown in domestic or vernacular architecture. The term vernacular architecture refers to the housing of common peoples or "fold-housing." It implies that no trained architect, craftsman or carpenter is employed in its construction. No modular materials such as factory made lumber, brick or tiles are used. There is little specialization of labour beyond that determined by age or sex. The knowledge of how to build is diffused among all the members of the group. The average family can and usually does build its own home. They follow traditional plans and use materials which are at hand, such as logs, willows, grasses for thatch, and plaster made from mixing straw and animal dung together. Their only tools are simple ones; sickles, axes, hammers, saws and drills. Wooden pegs are used instead of nails.

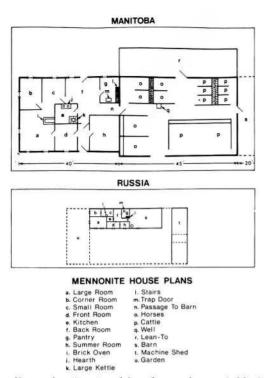
Ethnic groups tend to be strongly traditional. Their cultural ties are overtly expressed in their architecture. When ethnic groups emigrate they tend, if possible, to transfer their house types to their new locations. The object of this study was to determine to what extent building plans, methods of construction and use of traditional buildings materials were transferred from the Old World to the New. If known building materials were not available what adaptations were made? What social impact did adherence to traditional methods and materials have upon their sense of community? How did it affect their assimilation or integration into the surrounding Anglo-Saxon communities? What psychological and physical strengths or weaknesses did living in their traditional house types have upon these ethnic groups in the New World?

Through its early government policy of offering block settlements to encourage immigration Manitoba gathered ethnic people in closely located communities, notably the Mennonite Reserves in southern Manitoba in 1874 - 1975 and the Icelandic settlement in Gimli (the largest outside Iceland) in 1875. The first groups of Ukrainian immigrants between 1896-1914, although not given specific blocks of land, tended, for

cultural and social reasons, to locate together and as a result achieved a similar high density of ethnic groups. For purposes of study a sufficient number of house types in a specific area should be examined in order to draw any conclusions. Manitoba, therefore, provided through its early settlement pattern a suitable area in which to conduct a comparative study of the vernacular architecture of the Mennonite and Ukrainian peoples.

The Mennonites, who were the first of the ethnic groups to arrive, settled in the East and West Reserves (so named because of their location east and west of the Red River) in southern Manitoba. They brought with them their traditional village open field system of farming wherein the land was shared communally and the buildings were orientated on the land in a standardized plan. This system, which had evolved in Europe as a means of mutual defence against marauders, was also economical to operate. As well as a villege plan or Gewandorf the buildings themselves exhibited a type of architecture which was also unique. This was the house-barn combination which had evolved as a result of frequent flooding along the Vistula and Nogat River deltas where their settlements were located in Prussia. The buildings were situated on mounds of earth to protect them from flood damage. Over the years the house and barn were combined on one mound. The resultant house-barn architecture was transplanted to Russia and thence to Manitoba in 1874-86.

On their arrival in the Reserves the Mennonites built temporary shelters until they could locate in their villages. Most of these were sod houses or semlin with pole roofs covered with sod. A few very early shelters called sarai were also used. These were essentially a steeply pitched roof constructed of poles which rested on the ground. The roof was covered with grass thatch and sometimes either shiplap or logs were used to line the living area. The Sarai was much colder than the Semlin and therefore not as common.



Floor plans of houses from Russia and those from settlements in Manitoba, showing transfer of plans from the Old World to the New—J. Warkentin, Thesis "The Mennonite Settlements of Southern Manitoba," (1960) p. 118.

Much of the land in the southern part of the East Reserve proved shallow and extremely stoney. Over a period of time the combination of poor soil, drought and internal religious differences resulted in many settlers leaving the East Reserve and moving to the West Reserve. The latter became the first permanent agricultural settlement ever established in the open parairies of Western Canada without direct access to a major body or currect of water. No examples of the old village open field system exist today in the East Reserve but several excellent examples can still be found in the West Reserve.

In the open field systems of villages with communal land holdings there were no fences or other means of enclosure. The arable land was divided into strips call Kagel which were separated from each other by uncultivated strips called Raine. Over the years drifting soil accumulated on the uncultivated Raine forming visible ridges three to four feet in height making the dividing line very visible. Most of these have now been eradicated by the use of modern machinery but a few are still maintained in a field on the west side of the village of New Bergthal.

The joining of buildings which had two separate functions, such as the Mennonite house and barn, proved to have many advantages. It provided greater warmth and protection for both humans and animals in winter, and economy of time and effort in going back and forth to care for livestock. Its construction, with one wall common to the two buildings, was a more economical use of materials. In the country of its origin it also protected the animals from roving thieves.²

The standardized floor plan of the house-barn was one traditionally used in Russia and was transferred almost unchanged to Manitoba. In Russia the Mennonites used handmade brick as building material. When they arrived in Manitoba they adopted log construction using the Red River style common among settlers in the area at the time, with some changes and adaptations. Milled lumber was available by 1877 but was considered too expensive for common uses. In later years it was applied over the existing log structures as interior and exterior siding. A few builders used $2^{\rm w} \times 6^{\rm w}$ planks laid flat on the side and stacked up to ceiling height. The house-barn on the grounds of the Mennonite Museum at Steinbach is an example of this type of construction, built in 1892 in the West Reserve.

Joints and plates were fastened with wooden pegs, six to ten inches long and from one to two inches thick, through holes that had been bored in the joists. Although nails were available they were considered too costly and lacking in sufficient strength to secure the thick, heavy, handhewn timbers. Evidence of this type of joinery can be seen in a cross section of oak beams and pegs from the oldest church in the West Reserve, presently being restored in the village of Reinland. Foundations for the buildings were of unmortared field stone.

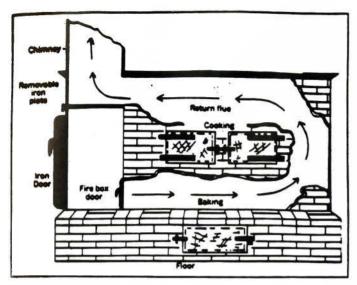
The barns were a very important part of the house-barn architecture. They housed the animals and provided storage space for grains and fodder, two commodities vital to the existence of the Mennonites. For this reason the barns were built with great strength to withstand the elements and to secure shelter for their contents. Huge beams and wooden pegs of oak were used for their construction. Support beams and joists were dovetailed for extra strength. Sway braces featured an unusual lap notch joinery which could be quite ornate as exhibited in the barn of J. Ens, of Reinland, circa 1885, one of the best preserved examples in the West Reserve.

The dimensions of the barn were usually two feet wider and two feet higher at the ridge than that of the house. The pitch of the roof was at the same angle as that of the house. The barn section of the house was always attached at the end furthest from the street. The interior of the barn, as well as that of the house, usually followed a standardized plan with a centre aisle running down the length of the barn from the door of the house to the door at the opposite end of the haymow. Stalls for the horses and cows were positioned on either side of the aisle. The majority of stalls were for horses because prior to the 1930's large numbers of them were necessary to supply the only source of farm power available. Cows, pigs and poultry were kept for domestic purposes. The sheen or large open area of the barn contained a threshing floor and space for grain storage. At either end of the sheen were double doors large enough to permit entry of teams of horses pulling wagons or hay racks. From the exterior these doors were identifiable by a distinct crisscross pattern of supports, usually painted white. Running the length of the front wall of the barn was a continuous row of small windows which provide the only source of light. The house was entered from the interior of the barn by a door which led into the kitchen. The connecting wall which joined the two buildings was sometimes insulated in the upper gable end above the log wall to provide extra warmth in the house.3

The H. Ens house in Reinland, now covered with lumber siding and used as a link to join the barn to a newer house built around the turn of the century, contains an excellent example of a very old type of adobe brick plaster in a lath grid used for insulation. The floor of this portion of the house is unusual in that the oak floor boards were laid flat directly on the impacted earth beneath it and does not rest on joists. Amazingly, after over 100 years of use, it is still in relatively good condition. A stairway to the second floor runs along the interior of the connecting wall to the barn. It was built in an almost vertical ladder-like pitch. In the newer house adjoining it, as well as in several others which were examined, this traditional very steep inclination of the stairs was still maintained. Although precipitous it was obviously a space saving method of building.



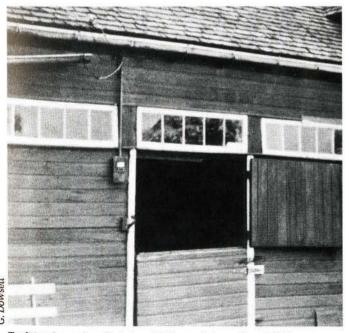
House-barn architecture showing differences in roof elevation and low, wide house door typical of early Mennonite homes. H.G. Enns house-barn, Beinland, Manitoba.



Construction detail of Mennonite brick heater. Klippenstein, L., and Goertzen, P., eds., "Mennonite Village Museum," Steinbach, (1980-81) p. 10.

Central to the Mennonite home, in fact at the very heart of it, was a large brick heater. The bricks used in its construction were made by hand; only the iron for the doors was purchased. It was built into the kitchen and connected to each of the rooms surrounding it by a small iron door, about three feet above floor level, which led into the stove. When this small door was open it provided heat for that particular room. Thus the stove provided a very early and efficient form of central heating. Though used primarily for heating it had a return flue and space on top of the fire box for cooking. Once it was fired the brick construction of the stove radiated steady heat and needed to be refueled only twice a day.⁴

The large brick heater or Tajel Owe worked when fuelled with either wood or manure bricks mest sooden, the latter being the most economical and frequently used. This method of heating was brought from Russia and was commonly used in areas where wood was scarce or costly. To manufacture the mest sooden a shallow pit about a foot in depth was dug. Into this was spread moist manure and straw. Horses, or women and children in bare feet, walked through it until it was sufficiently well mixed and compacted. After the mixture had dried for a few days it was cut and stacked in small triangles, two to four together, to dry. When sufficiently cured to handle they were then piled in larger beehive shaped stacks for storage.



Traditional row of small windows in Mennonite house-barn. B.S. Hamm, New Bergthol, Manitoba.

When available, a hand operated machine was also used. The manure and straw, when mixed by the method described, was poured into the top of the machine which compressed it and forced it out at the bottom of the machine into a long narrow strip of fuel. As the strip emerged from the machine it was chopped with an iron blade into regular sized pieces (similar to sections of a chocolate bar) which were caught on a large plank. The use of the plank facilitated carrying large strips of sections to a drying area. The fuel thus manufactured was light in weight and completely odourless. Samples of it can be seen and handled at the Mennonite Museum in Steinbach. In the village of New Bergthal the wood, which is still used for fuel in some homes, is still stacked in the beehive shape traditionally used for mest sooden.

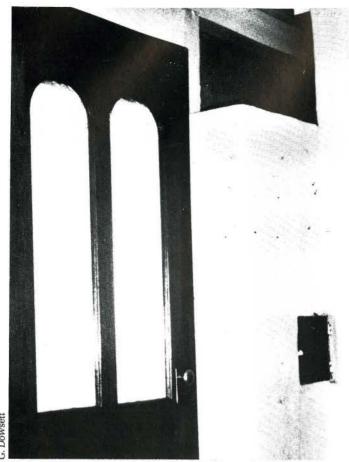
Furnishings of the Mennonite homes were also traditional. Religious control advocated conformity not only of village layout, construction methods, and floor plans, but simple furnishings as well. Among these were the cupboard or Mauerschrank and the washstand with a Russian water saver. Directly above the sink was a galvanized container with a flat side attached to the wall. On the bottom of the container was a simple valve similar to a nail pushed through a hole. The pressure of the water in the container kept the valve in place. Water was obtained for hand washing by pushing the protruding end of the valve upwards to release a small amount of water which flowed into the palm of the hand. It provided enough water to cleanse the dirt, but no more. For this reason it was called a "water saver." The container, about half the size of a ten pound pail, provided enough water to last a day. Soap for washing was homemade from a mixture of rendered animal fat and lye made from wood ashes. The soapy water, caught in a slop pail under the sink, was emptied with other laundry water onto the flower beds at the front of the house. Wood ashes, which were used in the making of soap, contain potash-a valuable nutrient for the soil. The Mennonite women, who introduced the dahlia to the parairies, are noted for the beautiful flower gardens in front of their homes. Many of their villages such as Blumenfield (field of flowers) and Rosengart (garden of flowers) were named for these gardens and are a tribute to the memory of these pioneer Mennonite women.

The Ukrainians, like the early Mennonites, were basically village orientated people. The system of land survey in western Canada required that a settler reside on his land for a term of three years. This, in 1874, had been waived for the Mennonite settlers in deference to their village settlement tradition. The Ukrainians, whose first settlement pattern in Western Canada was established in the years 1892-1914 were not given this exemption. They followed the existing method of settlement. Although unable to locate in villages they did tend to group together in specific areas such as Stuartburn in southeastern Manitoba which was the first occupied, and later in areas such as the Interlake, Dauphin and Roblin. The Ukrainians were for the most part extremely poor, unlike the Mennonites who brought gold with them to buy necessities and who received a government loan.

Their first temporary shelters were of log in the form of tipis covered with hay, sod or cowhide. Some were simple roothouses dug into banks of earth, similar to caves with crude doors or blankets over the openings. Their first permanent homes, like those of the Mennonites, followed traditional use of floor plans and methods of construction. Of necessity they used materials at hand which included logs, grass and handmade plaster of mixed clay, animal dung and straw.

The majority of the first group of Ukrainian settlers in Manitoba came from the provinces of Bukovynia and Galicia. The buildings of each had standardized floor plans. The Bukovynian design was three roomed with the smallest room or Siny, which served as an entrance, usually located in the middle. A few examples found in the area being studied had the Siny at the end. The standard design from Galicia had two rooms and if there was a Siny it was added to the front in the form of a small porch. Both floor plans located the building with the house facing south on the site. The east wall of the house in both cases was designated as the holy wall. Religious pictures were traditionally hung there.

Of the two styles the Bukovynian was the larger and somewhat more ornate. They each had distinctive exterior features which made them easily identifiable with the provinces of their origin. Those from Galicia had a simple gabled roof with either vertical poles or rough lumber filling in the gable end above the walls. Where the wall and the gabled end met a pent extension was built. This overhung and protected the plastered wall beneath from damage by the elements. The roof of the Bukovynian house was hip gabled and had a very wide eave overhang on the four sides of the house which protected the plastered walls. The eaves or soffits were strengthened because of their extra width with stepped log supports in which each succeeding log of the upper wall was about six inches longer than the one below it. All were secured with wooden pegs. Accustomed to building with logs in the Old World, the Ukrainians were able to utilize similar building material on the prairies. Logs most frequently available were of spruce or tamarack. They were either left round or squared. If round logs were used the corners were saddle and



Small iron door used to circulate heat from the oven to surrounding rooms. H.G. Enns house, Reinland, Manitoba.

notched—if the logs were squared the corners were dovetailed. In sparsely wooded areas poplar logs were used. Because of their smaller size long vertical pegs were inserted through them for extra strength. Ceilings and roof supports were made from smaller poles.

The houses were plastered inside and out with a mixture of clay, chopped straw and animal dung. It was applied in three separate layers with the coarsest mix used for the first coating, followed by a second finer mixture. When dry a final smooth layer, which contained lime with laundry bluing added to it to give brilliance to the final coating, was applied. If the logs were squared or peeled, extra purchase for the plaster was provided by nailing diagonally slender willow sticks as laths to the exterior walls.

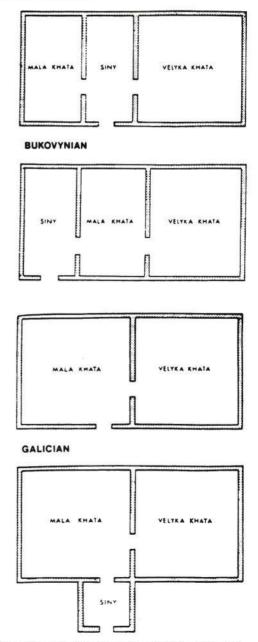
The early roofs were thatched with either slough grass or flax straw if available. Corner thatch on the roof slope was supported by a vertical peg driven into the lower end of the eave. The thatch on the ridge of the roof was held in place with crossed oak poles about a metre in length. Building foundations were of field stone.

In the hill districts of the Ukraine, houses were commonly built without chimneys. The smoke was vented into the attic and filtered out through the thatch which was secured to the purlins with ropes of twisted grass. When thatch was later replaced with shingles, two semi-arched openings known as eyebrow vents to allow the smoke to escape were left on the southern slope of the roof. These vents later evolved into dormer windows. Other Bukovynian houses had chimneys of woven willow which were plastered inside and out with clay to make them fireproof. Examples of these are extremely rare. Meat to be smoked was hung on wooden rods in the chimney.

Floors in the earliest years were of earth. This was firmly packed and coated weekly with a mix of soft cow dung and water to which some milk had been added. The mixture was applied to the earthen floor by hand using a cloth. When dry, the coating provided a hard, shiny surface which prevented dust from forming on the floor. This method of floor care was common in the Ukraine and used in a house in the Roblin area until as recently as 1946.

Although log and plaster construction was an excellent form of insulation, extra warmth was retained within the house by hanging woven grass mats over the windows in winter. Some houses were surrounded by pole palisades. The space between the poles and the house was filled with moss or hay. The foundations of the houses, built of field stones, were commonly insulated or "banked" with manure which generated a heat of its own and protected the floors from cold drafts. In the very early years small animals and poultry were sometimes also housed in part of the home for warmth and convenience.

As with the Mennonites, or indeed any home on the Canadian prairies, the stove and the heat it provided were essential to the survival of the inhabitants during the severe winters. The Bukovynians built a massive clay oven, or peech, in the smaller room of their homes. The oven was constructed by building a log framework on a stone foundation. Rising above this framework at the front or open end were four vertical poles connected to the ceiling and strengthened by horizontal bars at regular intervals. Over these bars were hung bunches of hay rolled in damp clay. When these had dried several outer layers of clay were applied to the overall structure giving a smooth exterior and interior surface. Near the top of the section of the peech, which was joined to the ceiling a clay vent or pipe was constructed at right angles through the wall into the ceilingless porch. There the smoke escaped through the thatch or shingles on the roof.



Typical plans of houses built by settlers from the Bukovynian and Galician districts of the Ukraine. Examples of transfer of these identical floor plans were found in all areas of study in Manitoba. Ledohowski, Edward M. and Butterfield, David K. Architectural Heritage: The Eastern Interlake Planning District. Department of Cultural Affairs and Historical Resources, Province of Manitoba, 1983, p. 58.



Remaining photographs in this article are of Stephen and Annie Negrych's farm buildings still in use at Venlaw, Manitoba 1899-1986. Hand plastered beamed interior of bed-sitting room showing traditional Holy Wall with religious pictures.

Behind the vertical poles connected to the ceiling the top of the peech, which was flat rather than rounded as were the outdoor bake ovens, extended from the back of the upright chimney to the outer wall of the house. The clay in this flat area retained heat from the fire throughout the night. Here, in the winter months, the babies and the elderly were customarily placed to sleep. When iron cookstoves became available the old clay ovens were, because of their massive size, shovelled out of the homes to make room for the new cookstove. An old cookhouse near Gardenton, Manitoba contains the only example of a clay peech with an iron cookstove vented into it retained in the same room.

Recently a Ukrainian farmstead, exhibiting all the traditional architectural features described, was found intact to the northwest of Dauphin, Manitoba. Here the Negrych family, from the Kolyma district of the Western Ukraine, emigrated in 1897. On the bank of the Drifting River four members of the Negrych kindred established their farmsteads on the inside corners of four quarter sections thus creating a miniature Ukrainian village in the centre of a section of land. It is the most complege and unaltered example of Ukrainian architecture still being lived in on the prairie.

Their homes, barn, bunkhouse, hen house and granaries were all built with materials found at hand. No skilled labour was employed. With the exception of three windows and some nails which Wasyl Negrych, following an old Indian trail, carried from Dauphin on his back, no purchased materials were used. All of the buildings were built of round spruce or tamarack logs with saddle and notch cornering. The house was finsihed inside and out with plaster mixed in the traditional way using clay, chopped straw and animal dung. Except for some patching over the years it has withstood the elements extremely well.

The beamed interior, in excellent condition, has been freshly whitewashed at regular intervals. The main room is a bed sitting room which contains two iron beds, a rocking chair, extension table, treadle sewing machine, small box heater and a coal oil lamp (the only source of lighting). The doors and hinges are handmade. The East or holy wall holds three religious pictures placed there by Wasyl and Anna which have been kept in their original positions for eighty-six years.

The small central room is the kitchen and originally contained a clay peech which was removed to make room for the iron cookstove—a very old model, which has two oven doors, hinged at the side rather than at the bottom. The furnishings consist of some handmade shelves, a washstand, a small worktable and a rain barrel for water. The house

has no running water, hydro, sink or washing machine. Everything is neat and orderly. Hand braided mats cover the floor. The warmth from the two wood stoves heats the interior. The house is now occupied by Stephen and Annie Negrych, the youngest surviving children of Wasyl and Anna. They have not sought to change it by adding modern conveniences but have chosen instead to maintain it as their parents originally built it.

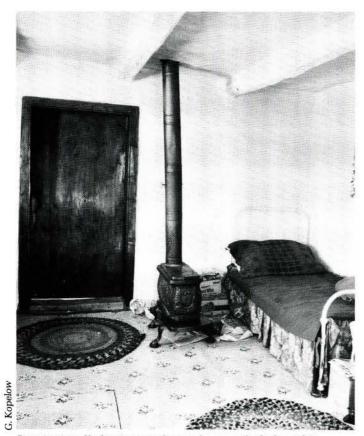
Not far from the main house is a small building in which Stephen sleeps. Built as a bunk house for him and his three brothers, it contains handmade wooden beds and the original handmade peech with which it was heated. There is no chimney, the smoke vented into the small porch rises into the attic and filters out through the handmade shakes on the roof. It is the only remaining example on the prairie of a peech in a building which is still being occupied.

The barn has a central passage for storage and unloading hay or grain. It's roof has handmade ventilators. Both the barn and the chicken house have slatted doors to keep the large animals out of the buildings when the solid doors are opened for ventilation. All the doors of the outbuildings, the barn, chicken house and granaries are outstanding examples of traditional Ukrainian construction. They are built without hinges. The doors are suspended from upright wooden poles which pivot in holes bored into supporting crossbars at the top and bottom of the door. Their construction is uniquely simple and employs no metal parts. The granary door, in perfect condition after many decades of use, has not sagged.

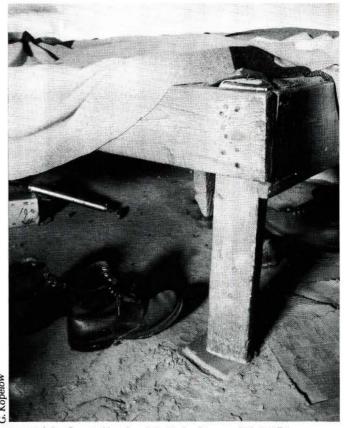
On the inside corner of the quarter section adjoining Stephen and Annie's buildings is a vacant log house built by Stephen's uncle. Reached by a short walk through a black spruce forest, it contains the most amazing and historically valuable item of the Negrych architecture—a massive handmade peech still in working condition. Built in the traditional Ukrainian fashion it is large enough to sleep three people on top of it. As well as the stove, the room also contains all the utensils used for tending it. There are a hoe shaped instrument or kotsuba used for removing the coals from the oven before putting in the bread; a peel or flat paddle used for putting the bread into and taking it out of the oven; a small wooden stool or stolets which held a wooden trough to knead the bread and a brush made from wheat straw wedged into a slit stick used for cleaning up ashes and soot.⁸ The wide bench surrounding the stove was used for sitting or keeping things warm. Above the stove, near the ceiling, is a pole used for hanging clothes to dry. The smoke from the stove is vented into the attic to disperse.



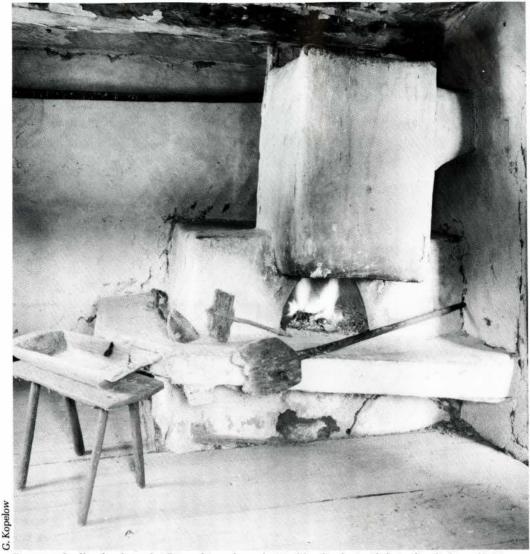
Kitchen with very early model of iron cookstove and original 1899 handmade cupboards.



Opposite view of bed-sitting room showing the very wide planks used in construction of the door.



 $Impacted\ clay\ floor\ and\ handmade\ bed\ in\ bunkhouse\ which\ is\ still\ in\ use.$



Rare example of handmade peech still in working order, and original handmade utensils for tending the fire and baking.

No longer able to work the land Stephen and Annie, in the autumn of 1984, sold their animals, machinery and all the artifacts—handwoven baskets, wooden churns, tools and wooden rakes—at an enormous auction sale. The Negrych buildings, continuously lived in since 1899 and preserved in their original condition, are true examples of prairie vernacular architecture. It is hoped that, when Stephen and Annie are no longer able to maintain them, the buildings will be purchased and moved to the new Silo Amphitheatre and Historic Site on the northern slope of the Riding Mountain to be preserved there as an integral part of Manitoba's ethnic architectural heritage.

A comparative study of the two ethnic groups showed that both the Mennonites and the Ukrainians transferred their traditional floor plans and methods of house and stove construction from the Old World to the New. The Mennonites, unable to use their customary brick building material, adopted the use of logs instead. The Ukrainians were able to use the same material to which they had been accustomed in the old world. The Mennonites were allowed by the government of the day to settle in villages and retained their open-field system type of settlement with its traditional house-barn architecture. The Ukrainians, restricted by the government from locating in villages, did, however, locate in groups in specific areas.

Socially, in an era which required a great deal of physical labour in order to exist, the members of each particular ethnic group banded together to work their land, harvest their crops and erect their buildings. This interdependence provided a strengthening element within their respective groups. Psychologically, life in a settlement which spoke the same language and shared the same religious and behavioural beliefs, provided a cohesive force within the immediate community. Unfortunately, the long range effect was negative. Until after the Second World War both the Mennonite and the Ukrainian groups clung to their traditional

ways of life and religious beliefs. They tended to look inward which even today are still evident in outlying areas settled by these two groups. Following the war the advent of rural electrification, television and large, mechanized farm machinery increased the rate of change in their life styles and attitudes and resulted in the assimilation of these communities into the larger surrounding society.

Original buildings from each of these cultures are becoming extremely scarce and should be preserved as valuable examples of prairie vernacular architecture. \Box

NOTES

- Emerick K. Francis, In Search of Utopia (Illinois: The Free Press, 1955), p. 63.
- L. Klippenstein and P. Goertzen, eds., Mennonite Village Museum (Steinbach: 1980-81), p. 8.
- J. Warkentin, "The Mennonite Settlements of Southern Manitoba."
 (A Thesis presented in Accordance with the Requirements of the Degree of Philosophy in the University of Toronto, Volumes I and II, 1960), p. 118.
- Julius G. Toews and Laurence Klippenstein, Manitoba Mennonite Memories (Altona and Steinbach: Manitoba Mennonite Centennial Committee, 1974), p. 302.
- J. Lehr, Ukrainian Vernacular Architecture in Alberta, Historic Sites Service, (Occasional Paper No. 1, 1976), p. 11.
- 6. Lehr, Ukrainian Vernacular Architecture in Alberta, p. 18.
- M. Ewanchuck, Pioneer Profiles: Ukrainian Settlers in Manitoba (Manitoba: Derksen Printers, Steinback, Manitoba, 1981), p. 98.
- 8. M. Ewanchuck, personal interview, February, 1986.