

FROM NAIN TO BETHLEHEM

At first glance, it seems impossible to see the similarity between the coastal villages of Labrador and the city of Bethlehem in the heart of industrial Pennsylvania.

There is, however, a strong relation: both Bethlehem and several of the Labrador communities were founded by the Moravian Church.

The Moravian Church – the *Unitas Fratrum* – United Brethren or The Unity of Brethren – traces its beginnings to the fifteenth century. Even before the time of Martin Luther, its members were attempting to reform the Catholic Church.

The movement began about 1457 in the present Czechoslovak province of Bohemia and spread to Moravia and Poland. Persecuted at home, the Moravians nonetheless sent missionaries to the far corners of the globe, from Tibet to the West Indies.

Jens Haven, a Moravian missionary to Greenland, established the first mission in Labrador at Nain in 1771, in an attempt to pacify the Eskimos who, 20 years previously, had murdered four other Moravian missionaries and some sailors they had lured ashore at Davis Inlet.

Eventually, other Labrador missions were opened at Okak, Hopedale, Hebron, Ramah, Zoar, Killenek and, in 1896, for settlers, at Makkovik.

U.S. IMMIGRANTS

At about the same time, other Moravians, hounded from their homes in Central Europe, were moving to the United States.

One group, attracted by the religious tolerance of Pennsylvania, emigrated there, then moved further west, where they purchased 5,000 acres as the Barony of Nazareth. They were joined by frustrated missionaries from Georgia, and eventually by shiploads of their brethren from Europe.

A new, nearby tract was opened and officially named Bethlehem on Christmas Eve 1741. By the following year, all the Nazareth settlers had moved to the new community. At one point, there was a village named Nain near Bethlehem but it was abandoned.

With the emphasis on piety, good schooling, hard work and no frills, the community and the area prospered, reaching its peak of influence about 1783, after the American Revolutionary War.

Bethlehem was considered a community of importance by the men who visited it on errands of government or business. Benjamin Franklin, for example, helped organize its defences against Indian attacks.

George Washington was there, as was another president of the United States, John Adams. The Marquis de Lafayette recovered in Bethlehem from battle wounds he suffered at Brandywine. John Hancock and many other delegates to the Continental Congress visited the town in 1777.



The Moravian church at Nain was one of the missions established on the Labrador coast during the eighteenth and nineteenth centuries. Earlier, in 1741, Moravians fleeing persecution in central Europe founded the community of Bethlehem, Pennsylvania.

NEW NRC MEASUREMENT INSTRUMENT

A Canadian invention has enabled the international scientific and industrial community to increase the accuracy of an important electrical measurement by ten times. The instrument, a "direct-current comparator", was developed by the National Research Council of Canada. It is being used in almost every national standards laboratory in the world, including the laboratories of NRC and the National Bureau of Standards in Washington.

The DCC makes it possible for laboratories to measure the standard of electrical resistance (the ohm) with an accuracy of one part in ten million. The previous accuracy was one part in a million. The new procedure can be compared with measuring a distance of a mile to the thickness of a human hair.

The ohm is one of a number of standards (others are mass, length and time) that are the legal basis for measurements. Increased accuracy in the measurement of standards is essential if science and industry are to cope with the demands of modern technology.

All standards are defined by international agreement with the assistance of the International Bureau of Weights and Measures, which also uses the direct current comparator. NRC and the National Bureau of Standards, for example, are responsible for maintaining standards in conformity with the international definition.

The current comparator was used in the extremely accurate measurements required in the U.S. space program.