Vermillion River Walking Tour

Presented by the Dakota County Historical Society
at the LeDuc Historic Estate

Dakota County Historical Society
From its source in southeastern Scott County, Minnesota, to its meeting with the Mississippi River in Goodhue County near Red Wing, the Vermillion River transects miles of open space, scenic farmland and human settlements. It drops 90 feet in elevation as it travels over waterfalls and through a deep gorge in the City of Hastings. The channel splits into two forks, flowing both north and south, and continues through floodplain forests and wetlands before its waters eventually blend into the mighty Mississippi.

Advancing and retreating glaciers, ceaseless weathering and hydrologic processes, and human development activities have shaped the area surrounding the river and created some of southern Dakota County’s most beautiful landscapes. As critical habitat for both wildlife and humans, the Vermillion River’s importance cannot be overstated and its fragile beauty must be protected.

Prior to 1851, this was a largely unsettled wilderness frequently visited by the Dakota Indians. They named this region Owobopte meaning “the place where they dig tipsin.” Tipsin or Indian breadroot is a native wildflower that grows in dry, sandy soil and flourished on the high banks of the Vermillion. The starchy, thick root was prized by the Dakota as a staple in their diet. As they passed through on their journeys from Wabashaw’s village in the south to Black Dog’s village on the Minnesota River they would stop here to harvest tipsin and fish in the “Owobopte Wak-pah-da,” their name for the Vermillion River. They called the falls “Owobopte Wak-pah-da-ha-ha”.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.

The 1851 Treaties of Traverse des Sioux and Mendota allowed settlers to move into the land west of the Mississippi. Although the treaties were not ratified until June 23, 1852, squatters immediately moved in and began to build shacks on their claims right after the treaties were signed. Squatters disregarded treaty rules and those of the pre-emption act of 1841, which required land to be surveyed before it could be claimed. According to the act, settlers who established claims on surveyed land could legalize their ownership by filing a claim at an appointed land office and paying the official price of a minimum of $1.25 an acre. When the same property was claimed by two individuals it became a race to get to the nearest land office; from Hastings, that office was a day’s trip away in Red Wing, MN.

The Vermillion River, having two waterfalls, attracted several squatters interested in its water power. Two brothers named Osborne claimed the lower falls in 1852. They sold their unfiled claim to the Halstead brothers, who in turn sold it to Governor Alexander Ramsey and Dr. Thomas Foster. Foster was a physician and served as Governor Ramsey’s private secretary.

The mill ruins became a Minnesota Historic Site and together with the park were officially dedicated to the citizens of Hastings on August 17, 1958. Today, a series of rapids exist where the lower waterfall once stood, and the mill ruins stand as a reminder of territorial Minnesota.
Civil War, William LeDuc spent a considerable amount of his time and personal money obtaining land grants required for the construction of a railroad from Hastings to Glencoe, Minnesota. The H & D opened for passenger service on December 15th, 1862. In 1872 LeDuc brokered a deal to sell the line because one of its major investors encountered financial difficulties. The H & D was sold to the Milwaukee & St. Paul Railroad Company and LeDuc was cut out of the profits of the sale. In 1913, the widow of one of the men who had cheated him in that transaction left William LeDuc $100,000 in her will.

The bridge was eventually remodeled by the Hastings Lions’ Club for the city bike trail system.

A small ravine east of the bridge, called Undine Basin by the LeDuc family, was a favorite picnic spot where they enjoyed gathering ferns and moss in the shady bower. It continues to be a popular spot for relaxation and recreation today.

Abraham Truax claimed 160 acres on the north shore of the Vermillion River and settled on his property in 1851. He was active in squatters’ politics to justify claiming property before it was surveyed. Described as a “generous man, hardy of physique,” he worked with early settlers as a carpenter and owned and operated a ferry across the Mississippi River. William LeDuc wrote about Abe Truax accompanying him and a friend on a fishing expedition to Trout Brook. On the return from this trip, Harrison Graham approached LeDuc to file a land claim for a site on the upper falls.

**THE UPPER FALLS**

The Upper Falls have a 60' drop which made it attractive to early settlers. Justus Ramsey, brother to Alexander, had an interest in the property on the north shore of the river embracing the falls and engaged James Main to hold his claim. Harrison Graham built a small two room house and primitive grist mill upon this same claim. Graham hired William LeDuc in 1855 to file a claim at the land office in Red Wing and obtained title for 160 acres, double the 80 acres he originally sought. It became a windfall for LeDuc—Graham paid him 80 acres in return for his efforts.

In 1856 LeDuc purchased the remaining 80 acres, including buildings, from Graham. He hired a millwright to oversee the rebuilding of the crude mill thereby doubling its output. On October 17, 1860, he sold the mill and 20 acres to the Harrison Brothers.

Stephen Gardner purchased the mill in October of 1863. He immediately enlarged the mill and upgraded the equipment. One can see the original 60’x80’ stone building embedded in today’s structure. The limestone used for this construction was quarried from the Vermillion River gorge.

The Gardner Mill ran with both water and steam power. The water power was harnessed by an iron flume and penstock, and a 30-inch American turbine waterwheel. Some of the old equipment is still visible on the outside of the mill just above the falls. It was sold in 1926, and the new owners named the mill and the flour they produced King Midas. Currently owned and operated by ConAgra, it is one of the largest and longest-operating mills in the entire country.

**NATURAL HISTORY OF THE GORGE**

**Gorge Geology**

400 to 600 million years ago sediments settled on the shores and bottoms of large ancient oceans and became the sedimentary rock that now underlies all of Dakota County. Evident in the tall bluffs of the Mississippi River near Hastings, as well as the buff-colored rock of the Vermillion Falls gorge, some of this sedimentary rock is known to geologists as Shakopee dolomite and Oneota dolomite. These dolomites, found in the Prairie du Chien group, are typically tan to gray-colored, fine to medium-grained sedimentary rock. Millions of years later, advancing and retreating glaciers and their fast-flowing glacial melt waters shaped the landscape. Glaciers deposited sediments, rocks, and boulders, and roaring glacial rivers scoured pathways and channels still visible to
Parking is available near the parks and trails. Please inquire when you make your reservation.
the keen observer. Approximately 12,000 years ago the Vermillion River found its current path and a waterfall existed about 1.5 km downstream from its present-day location. Were it not for the artificial stabilization of the falls near the mill site, the falls would have likely continued their migration upstream through the thick bedrock and created a larger gorge than we see today.

While standing on the bridge overlooking the river one can see caves and crevices in the dolomite where infiltrating groundwater and rainwater dissolved rock and created natural caverns. Mile Cave, found in the Vermillion River gorge and possibly named for its length, provided much legend and folklore to the area. Some believe the cave to be a refuge for Indians and early settlers; others believe it terminates in the cellar of the LeDuc house (it doesn’t). While intrepid adventurers explored Mile Cave in the past, current conditions make further explorations ill-advised for all but expert spelunkers.

Settlement and Natural Communities

The first government land surveys took place between 1848 and 1907 allowing the United States to systematically locate and legally describe parcels of land to be sold to settlers moving into new territories.

Minneapolis’s original survey maps serve as the basis of legal real estate records in the state, and an important historical archive of land features prior to the influx of European settlers. Surveyors noted vegetation and topography details, water features, and elevations along section lines, and often marked section corners with “witness” trees that could be identified and re-located by their species and size.

Between 1929 and 1931, mapmaker Francis J. Marschner relied on the notes of the original land surveyors to piece together his “The Original Vegetation of Minnesota” map, though he had never set foot in the state. This map shows three major bands of vegetation in Minnesota: grassland or prairie, deciduous forest, and coniferous forest. Visible also are zones of transition or “ecotones” where plant communities blend and intergrade according to local soils, topography, climate and precipitation patterns. Though Marschner’s map contains factual errors and inherent flaws it is consistently used by cartographers, historians, and scientists to track human-caused landscape changes through time, and identify new areas of research for the future.

According to Marschner’s map, much of Dakota County (and almost a third of the entire state of Minnesota) was covered by upland or wet prairies occasionally broken by intervening water features and woodlands. The areas near rivers and streams provided sufficient soil moisture for trees to grow, especially willows, cottonwood, and elms. Also, the deeply grooved, corky bark of certain trees, such as bur oaks, resisted the frequent prairie fires that purged and renewed the surrounding grasslands.

Beneath the thickly matted roots of the prairie plants, early settlers discovered soils suitable for farming. With the advent of the steel plow, prairie grasses and flowers were quickly replaced with cover crops such as wheat, corn, soybeans, sorghum, and oats. Today, only 1% of the formerly expansive prairies remain in scattered tracts across Minnesota and the Great Plains.

Vermillion Falls Park provides a beautiful example of oak savanna, typified by a canopy of hardwood trees (such as bur oak, pin oak, maple and elm) that dominate the landscape with prairie grasses and flowers filling the openings in between. Look closely to find reminders of the vast prairies that once existed: sprays of grasses like big bluestem, little bluestem and Indian grass mixed with flowers such as goldenrod and black-eyed susan. Today, this “island” surrounded by human development provides habitat for insects, small mammals, and reptiles; nesting locations for migratory birds and raptors; a refuge for rare plant species; and an opportunity for humans to interact with nature and reflect upon our place in the natural world.

Fruit of the Earth: Tipsin

Indian breadroot, also called tipsin and prairie turnip, became a staple in the diet of the Dakota and was used by early settlers on the prairie. French explorers nicknamed the plant “pomme de terre,” meaning “apple of the earth” (from which the Pomme de Terre River in Minnesota also derives its name). Indians used the starchy, tuberous root as a boiled or mashed food, ate it peeled raw, and dried and stored it for later use in the winter.
The scientific name, \textit{Pediomelum esculentum}, describes tipsin’s characteristics neatly: \textit{Pediomelum} = Greek, meaning “plain apple” and \textit{esculentum} = Latin, meaning edible. Growing to approximately one foot tall, this perennial plant can be identified by its palmately compound, alternately arranged hairy leaves and hairy stem. Its sizable blue flower heads can be found blooming May through July. It also has an interesting seed dispersal mechanism: late in the fall the herbaceous upper part of the plant disconnects from the underground portions and tumbles about with the wind, effectively scattering its seeds across the prairie.

Supremely adapted to our local conditions, native prairie plants make beautiful and low-maintenance additions to our home gardens and landscapes. Many native plants and related hybrids are available for landscaping at your local nursery or online from native plant seed banks. (Due to the rarity of native plants they should never be dug, picked, or disturbed today—in many cases state and federal laws make it illegal to harvest native plants.) Be sure to the visit the Old Mill Park and Vermillion Falls Park frequently as each new season provides a beautiful, changing display of the oak savanna as well as important reminders of our collective cultural heritage.

**Beautiful, but Impaired**

The scenic beauty of the Vermillion River belies its current impaired status. “Impaired” surface waters do not meet one or more current water quality standards according to Section 303(d) of the Clean Water Act of 1977; by law, states are required to identify impaired surface waters and take management actions to improve them.

The northern reaches of the Vermillion River supply critical habitat to naturally-reproducing brown trout populations, but are unfortunately not fit for aquatic recreation by people. Although the rapids below the Vermillion Falls in Hastings are loved by kayakers, they also contain high levels of suspended sediments and organic material, resulting in turbid or murky water that is dangerous to aquatic life.

The Vermillion River Watershed Joint Powers Organization (VRWJPO) began with a joint agreement by Dakota and Scott Counties to work together to manage Vermillion River watershed resources and implement the 2005 Watershed Plan. VRWJPO currently develops water quality standards for pollutant levels that will be used to monitor water quality, animal populations, and overall system health today and into the future. To learn more about how you can help protect the Vermillion River watershed or become a Vermillion River Steward, visit www.vermillionriverwatershed.org or www.fmr.org.

**Vermillion River Walking Tour**

\emph{History of Dakota County and the City of Hastings, Including the Explorers and Pioneers of Minnesota,} (Minneapolis: North Star Publishing Company, 1881)


Pioneer Room, Hastings City Hall.

For more information on the LeDuc family go to www.dakotahistory.org.

**Natural History of the Gorge**


Reservations required for the Walking Tour. Please call 651.437.7055 to make a reservation.

**LeDuc Historic Estate**  
1629 Vermillion Street  
Hastings, MN 55033  
651.437.7055  
www.dakotahistory.org/leduc/home.asp

**Lawshe Memorial Museum**  
130 Third Avenue North  
South St. Paul, MN 55075  
651.552.7548  
www.dakotahistory.org

This project has been made possible by the Arts and Cultural Heritage Fund through the vote of Minnesotans on November 4, 2008. Administered by the Minnesota Historical Society.

This publication was made possible in part by the people of Minnesota through a grant funded by an appropriation to the Minnesota Historical Society from the Minnesota Arts and Cultural Heritage Fund. Any views, findings, opinions, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily represent those of the State of Minnesota, the Minnesota Historical Society, or the Minnesota Historic Resources Advisory Committee.