Ionia Volcano

A unique 'smoking hill' looks over the prairie for miles, providing a spectacular view of the river as it twists in the bottomlands. By Marita Placek
Wow! What a view! Standing in northeast Nebraska on what remains of the Ionia Volcano, you can look down over its edge, scan the northern horizon, and see the most incredible panorama—a colossal patchwork quilt stitching together lush cropland and expansive pastures under a clear, blue sky. Bordering the edge of this breathtaking scene is the mighty Missouri River, snaking through the trees like a thin, blue ribbon.

Two hundred years ago, the channel of the Missouri River flowed along the foot of the Ionia Volcano. Since that time, through the process of accretion, the river has crept over a mile away.

A newly installed interpretive panel placed on the volcanic bluff last October describes the process of the land being built up by the river’s powerful channel over the past two centuries.

This “smoking hill” was well-known by the Indian tribes and was already a part of their tribal history. French voyagers who had ventured up river also happened upon the strange and wonderful sight. Being superstitious, they speculated endlessly about what might cause the smoke to curl up from the bluff.

The men on the Lewis and Clark Expedition first heard stories of the Ionia Volcano while in St. Louis and were looking forward to seeing this smoking volcano. On August 24, 1804, after four and a half months of back-breaking work paddling up river, they had their first look.

In his journal, William Clark described the bluff as being 180 to 190 feet high and smoldering. Upon closer examination the men discovered a crevice that was smoking and so hot they couldn’t hold their hands in it. There was no fire or flame, just searing heat and acrid fumes. Clark also noted signs of coal and what looked like cobalt and other poisonous minerals.

While making his observations, Captain Meriwether Lewis became seriously ill, apparently from breathing in the volcanic fumes. (Years later scientists discovered Lewis had inhaled sulfuric acid, which in large doses can seriously injure the lungs.)

Lewis’ illness proved to be a blessing in disguise, though, because it helped him identify the cause of mysterious health problems among the crew. The men were in the habit of getting their drinking water from the surface of the river. Lewis’ experience with the volcanic fumes led him to suspect there might be toxic minerals in the river water. He ordered the men to stir the water vigorously and to take their drinking water from a greater depth. It was a wise decision, as it put an end to the stomach disorders and even cleared up the many cases of boils that had been plaguing the men.

Over the evening campfire Lewis and Clark’s Indian guides related the legend of the Ionia Volcano, tales which had been passed down from their ancestors. The guides even showed the explorers the remains of an ancient Indian village in the area.

According to tribal legend, at each full moon the fire-worshiping Arapahoe
of long, long ago sacrificed their sick, aged, and infirm together with all prisoners of war to the fire god, whom they believed lived in the fiery depths of the volcano. These sacrifices were meant to ensure that the buffalo would return to their hunting grounds, the warriors would be mighty in battle and fruitful on the hunt, and the babes would grow into strong, straight brave. It was also believed that a maiden must die to bring about all this good fortune.

Wachepah, his brother, and their beloved sister were hostages. Chief Kahdachegeha had decreed Wachepah must murder his sister as a sacrifice to the fire god of the volcano in order to save his brother’s life.

The terrified trio, along with the other prisoners, led by their tormentors, entered the base of the rock and made their way along the natural passageways to the hidden altar chamber. The torches threw grotesque shadows on the porous walls as each step drew the captives closer to impending doom. Suddenly the sacred cavern of death yawned before them.

Torches and ceremonial fires cast an eerie light across the vault, glinting on the knives and accenting the sharpened stakes, which lined the room. A bloodstained slab in the center bespoke other grisly sacrifices. Here captives’ eyes were gouged out, their legs severed with red-hot flint knives, and their skin flayed from their bodies before the eternal fire of the volcano brought merciful death.

Torn from the protection of her brothers, the terrified girl was secured to the rock. Gripping his knife, Wachepah edged toward his helpless sister. The sign given, he bent over the intended victim. With a lunge, he sprang past his fainting sister and plunged the blade deep into the chest of the chief. Quickly other captives sprang on their guards. In seconds the unholy shrine was red with the blood of both the Arapaho and their captives.

But even the rampant death and destruction in the temple could not appease the Great Spirit. The sound of thunder, a thousand times more terrifying than ever heard before, echoed through the room and rumbled down the corridors. With a grinding crash the earth opened and swallowed both the living and dead. In its wrath, the fire god had destroyed those who had violated his temple.

Such was their legend of the Ionia Volcano. Whether this legend has any historical basis continues to be debated. Old timers claim that at least part of the story must be true because of an old temple site located south of the volcano.

Local expert Annie Lamprecht, who owns the nearby 240-acre Indian Hills Archeological Zone, argues in no uncertain terms that the legend is not true. She says the Arapaho never lived in this part of Nebraska, there never was a temple, the depression where legend says the old temple stood was actually the remains of an earthlodge...and she knows this for a fact, because she unearthed it!

According to the Dictionary of Archaeology, “an earthlodge is the name given by archaeologists to refer to a kind of permanent house, built of wattle and daub construction and covered over with sod. Often earthlodges were semi-subterranean, such that a shallow depression was excavated into the ground for a prepared floor. The earthlodge was used by the Middle Missouri Tradition and later peoples of the American plains.”

Lamprecht says the earthlodge near the base of the Ionia Volcano was built by tribes who lived there from about 800 A.D. to 1350 A.D.

“It took me five years to excavate that depression. It was thirty-five feet across and two to three feet deep in the ground,” she explains. “I did all the digging and work myself and then I contacted the University of Nebraska to come and see what I had found.”

Lamprecht’s archaeological find is recorded in the National Register of Historic Places as the Indian Hill National Historical Site, better known as “Annie’s Site.”

This 79-year-old self-taught explorer and historian, whose home is located directly east of the original Ionia town site, has devoted her spare time to furthering her education by reading science journals and history books and searching the hills around the Ionia Volcano for artifacts of both Indians and whites. “I’ve unearthed thousands of artifacts,” Lamprecht continues, “and foundations from old homesteads can still be found on the hills, though not on the bottomland. All of early day Ionia was washed away and is probably well past St. Louis by now. The land has built back up to what we’ve got now.”

A French geographer and geologist, Joseph Nicollet, arrived at the Ionia site in 1839 and declared he would prove the ‘smoking hill’ was not of volcanic origin. In that respect he was right, no true volcanic materials have ever been found. Usually called ‘burning bluffs’, ‘burning mountains’ or ‘burnt hills’, similar hot banks are known to exist along the Missouri River in other states. Technically, none are volcanoes.

Nicollet theorized that the smoldering phenomenon was due to the meeting of shale and overlying coal beds that had been ignited by spontaneous combustion or lightning or other means and he named it a pseudo-volcano, since true volcanoes are composed of lava and ash.

The town of Ionia got its start as a lonely trading post located northeast and below the bluff of the Ionia Volcano near the Missouri River in the late 1700s. In 1856, half a century after Lewis and Clark made their famous trip to the Pacific Ocean and back, Sioux City surveyors Cunningham and White staked out the town site for the newly created village and decided to name it after the volcano. Ionia became the port of entry for many early settlers.

The next year the proprietors of Ionia decided to sell the town site. Upon hearing that the town was for sale, Mr. L. T. Hill of Davenport, Iowa, bought it immediately. From that point on, he devoted his time and energy into building and improving Ionia.

Although it broke up the monotony of frontier life, the occasional visit from local Indians was frightening for Ionia.

IF YOU GO:
In Newcastle, Nebr., turn north off Hwy. 12 onto Martha Street (the street across Pfister Park). Follow the road 2-1/2 miles until you come to a fork in the road. Turn right 2-1/2 miles. The Ionia Volcano site is across the road from the Ionia Cemetery.
pioneers, especially the women. The Indians usually appeared when the men were away. They would brandish their weapons in the air, scaring the women out of their wits until they gave the braves tobacco, supplies, and any other item that struck their fancy. Once they got what they wanted, the Indians apparently departed cheerfully. For the most part, the Indians were peaceful and no bloodshed was ever reported.

In the spring of 1860 Hill built the first ferryboat, which made it easier for the farmers to take their produce across the river to sell at the Ft. Randall Reservation in Dakota Territory. That same year he was instrumental in getting a post office established in Ionia, and also one across the river at Vermillion in Dakota Territory. River navigation for commercial purposes was becoming a popular idea. The next year the first steam ferryboat above Sioux City was built and operated by brothers Walt and Allen Ellyson.

As more people settled at Ionia, its legendary volcano continued to draw attention to the area. In the 1870s, steamboats carrying curious sightseers from Ponca and Sioux City made regular excursion trips up the river to the Ionia Volcano. Local citizens delighted tourists by jabbing poles into the crater; its intense heat charred the poles in seconds.

Perhaps one of the most imaginative and colorful explanations given for Ionia’s ‘smoking hill’ was told to tourists by old-timers. They claimed a huge earth slide had covered a gigantic Indian campfire, and the flames still burned deep in the earth.

In 1875 Ionia was at its peak and covered almost a square mile of land with streets, parks, several merchandise stores, two hotels, two sawmills, one grist mill, a shoe and boot factory, a drug store, saloons and dance halls, blacksmith shops, wagon shops, carpenter shops, assorted stores, hotels, a large sawmill, about 30 dwelling houses and a population of several hundred people. Unfortunately, because of its location, Ionia was at the mercy of the many flooding rampages of the Missouri River, which worked constantly at undermining the very foundations of the growing village.

Near the end of the 19th century, a new and more plausible explanation concerning the heat and smoke of the Ionia Volcano was offered by scientists who suggested that the waters of melting snow and heavy rains might be combining with the sulfide in the clay and shale of the hill to cause a reaction. The scientists feared that any diversion of the...
river channel might again set off the volcano. So when the area was hit by an earthquake at noon on November 15, 1877, Ioniaans held their collective breath and prayed there would be no volcanic eruption.

The next spring a large section of the ‘volcano’ fell into the river when the Missouri River flooded and undermined the bluffs, nearly washing away the town of Ionia in the process.

This erosion of the assaulting river in 1878 forced townsmen to move the village to higher ground. Residents finally surrendered to the voracious appetite of the Missouri River by relocating to the nearby town of Newcastle and Ionia ceased to exist as a town in the early 1890s. Thus the mighty and destructive force that destroyed the Ionia Volcano had finally succeeded in destroying the volcano’s namesake as well.

The Ionia Post Office, however, continued operating in the otherwise abandoned town until 1907, when mail service was transferred to Newcastle. The ‘volcano’ stories began to die out after the post office closed.

By 1950 one lonely building remained standing in the deserted town of Ionia. Palmer and Elsie Lund and their children, Sheryl, Linda and Rod, moved into the old Ionia Hotel and made it their home for the next 38 years.

“I don’t understand how it could have been a hotel,” says Elsie Lund. “There were just two small bedrooms upstairs and two rooms downstairs. We moved a trailer in and set it beside the house for additional room. I guess the outbuildings must have been left when the town moved – I really don’t remember where they came from.

“At that time the river was much closer. In the spring when the river flooded we actually went boating in the field that was between the dooryard and the river. The river was the kid’s playground. Rod practically lived in the river...and to this day swims like a fish,” Elsie notes.

“The ferryboat landing dock was on a small creek that flowed into the river about a quarter mile north of the house,” she continues. “The house and outbuildings were on a small rise and the water never got high enough to threaten us. A school with an old desk sat on the hill in the pasture behind us.

“The house wasn’t in much better shape than the outbuildings when we left the farm in 1988. In fact, the house was in such bad shape, when we had our sale, people said all the stuff we had in the house was the only thing that kept it standing,” laughs Elsie.

“The owner of the land on which the original Ionia town site sits was very interested and willing to have the Ionia Hotel added to the Register of Historical Places. They wanted it restored before accepting it,” relates Elsie. “He wasn’t able to do that, so he had a bulldozer dig a large hole in the ground and shove all the buildings in and covered them up. The only thing left of the homestead is the windmill.”

Modern day geologists have ruled out Nicollet’s speculation the pseudo-volcanoes were ignited by lightning strikes or prairie fires. Currently, the best scientific explanation for this phenomenon of smoldering pits is based on the fact that some of the shale deposits along the Missouri contain oil, making the rocks carbonaceous and therefore flammable. Nicollet may have been right about the possibility of spontaneous combustion, though. Some of these shale deposits also contain sulfide minerals which are known for their spontaneous oxidation and combustion.

The combination of these minerals and their properties results in a complex interaction whereby the sulfides interact with oil shale, air, water and possibly bacteria in creating a spontaneous combustion that can keep such sites smoldering for two or three years if conditions are right, resulting in the term ‘burnt hills’.

Even though the town of Ionia and the Ionia Volcano today lie far beneath the earth, at the bottom of the old riverbed, and the Ionia Township is no more, visitors still stop to visit the site of the once-famous volcano. There they can read the historical marker, study the newly installed interpretive panel on the Ionia Hill, and walk through the well-kept Ionia Cemetery across the road from the volcano site.

Marita Placek lives on a farm near Lynch, Nebraska.