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Springs of the Flint Hills

Rex Buchanan

Bob Swain

Wayne Lebsack

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CRYSTAL SPRINGS

Springs of the Flint Hills

Jack Spring is a prairie oasis. Tucked away in southwestern Chase County, it's only a few miles from the Kansas Turnpike, but a world away in terms of the setting. The spring spills out of dark openings in a limestone bluff, then drops down into a creek choked with bright green watercress. Minnows dart in the water. Leaves rustle in the cottonwoods.



Jack Spring is just one of many places in the Flint Hills where, for centuries, water has brought together people, plants, and animals.

Springs bubble up throughout the Flint Hills, from Riley County in the north to Cowley County in the south. In general, geologists define the Flint Hills as the region of east-central Kansas covered by shallow seas during the Permian Period of geologic history, about 290 million years ago. The rocks

here are interbedded layers of limestone and shale. In places, the limestone holds masses of chert, or flint, which gave the hills their name.

This is a relatively humid region, receiving more than 25 inches of precipitation in an average year. [Though limestone may look impenetrable, the rock's pore spaces, joints, and other open space allow water to seep in and accumulate. Shale, on the other hand, is tighter,



JACK SPRING

less permeable. The places where shale and limestone meet is called a “contact.” When water moves down through limestone, then encounters an impermeable shale, the water may move along that contact until it finds a place to exit at the earth’s surface. If it produces enough water, this exit is called a “contact spring.”]

Because the underground rocks in the Flint Hills can accumulate large amounts of water, springs here are among the most prolific in the state. Many continue to flow during the driest of times. Some produce more than a thousand gallons of water per minute, enough to supply a fairly large town. Because much of the Flint Hills remains in native pasture,

the water quality in these springs is relatively high. [Thus, Flint Hills springs remain a resource, and a treasured part of the Kansas landscape, that are worth knowing and protecting.]

Among the most historic of these places is Diamond Spring, west of Council Grove on the old Santa Fe Trail. Water was important in determining the course of the trail; in places, the trail went from spring-to-spring across the landscape. Diamond Spring was one of those stopping points. During a survey of the trail in 1825, George Sibley wrote that Diamond Spring “furnishes the greatest abundance of most excellent, clear, cold water—enough to supply an army.”

Not all the encounters at Diamond Spring were as idyllic, however. In 1863, Bloody Bill Anderson and his bushwackers killed the owner of a store near Diamond Spring.

Today Diamond Spring still flows at several hundred gallons per minute. It is on private property, and some of the water from the spring is diverted into a concrete tank for watering cattle. In the 1980s, William Least Heat-Moon visited Diamond Spring when he was working on the book *PrairyErth*, about Chase County (even though Diamond Spring is in Morris County). Heat-Moon was none too happy about what he found. “I’ve walked beyond the spring and turn around to find it where I hoped it wouldn’t be – at the mutilated edge of a stony square packed hard by hooves,” he wrote. “To turn the Diamond of the Plain into a stock tank is the damndest thing I’ve yet seen here.”

About a day’s travel (by wagon) west of Diamond Spring is Lost Spring, just west of today’s town of Lost Springs. The spring got its name

for obvious reasons: it sometimes disappeared or became difficult to find (Heat-Moon said that searching for Lost Spring allowed “a visitor the pleasurable mystery of hunting something he knows to be in plain view.”). Lost Spring is, however, a little easier to access than Diamond Spring. It has been fenced and a sign erected to describe its importance.

Several Flint Hills springs played a role in more recent human history. In the late 1800s, mineral water resorts were popular throughout the country, including Kansas. Just a stone’s throw north of I-70, east of Manhattan, are the remains of Blasing’s Artesian Mineral Wells, where people came to the hotel to “take the waters.” In Marion County, on the western edge of the Flint Hills, is Chingawassa Springs. This was also the site of a hotel and spa, and a railroad spur was built from Marion to the springs. Water still flows here at the rate of several hundred gallons per minute, but a lonely stone abutment along the railroad grade is about the only evidence of the old resort.

Some Flint Hills springs continue to provide water for people. One of the best known is Rock Springs, which supplies the water for the 4-H camp of the same name in northeastern Geary County. The spring flows out of a walled-up area, through a concrete trough, into Lyon Creek. Though the water in Rock Springs sometimes becomes slightly murky after a heavy rain, it's generally a reliable source of high-quality water.

Near this year's Symphony site is the small town of Florence, where the water tower boasts that the town's water supply is 99.96% pure. That water comes from Crystal Spring, about a mile north of town, a source of water for Florence since 1920. The spring produces more water than Florence can use, the excess flowing into a shallow, gravel-bottomed creek on its way to the Cottonwood River. Analyses of the water's quality show that the Florence water tower is about right.

While these springs are used heavily, maybe the most compelling

springs in the Flint Hills are those that are hidden away, back in the pastures and the places where people seldom go. Jack Spring, mentioned above, is a good example. It's also an example of a spring formed in a cave system, something fairly common in the Flint Hills. At Jack Spring, cavers have been able to squeeze into the openings where the water flows out, following one passage in the limestone some 4,872 feet (though in places the ceiling is only 18 inches high). Quiet and isolated today, Jack Spring was once a place where locals gathered for picnics and to take home water.

Maybe the granddaddy of these hidden springs is Miller Spring, southwest of Cedar Point. This is an undeveloped spring that flows an estimated 1800 gallons of water per minute from the mouth of a limestone opening down through a big stand of watercress. As with many Flint Hills springs, the water from this one is of high quality.

This isn't an exhaustive list of Flint Hills springs. Depending on the

weather and the time of year, springs are common. An April 2001 inventory of springs on the Tallgrass Prairie National Preserve (the site of the 2006 Symphony on the Prairie) turned up more than 200 springs, scattered over the nearly 11,000 acres of the ranch (which was originally known as the Spring Hill Ranch, based on a spring that issued near the present-day ranch house). The biggest of these is Red House Spring, which flows at more than 100 gallons per minute.

Most produce much less. A re-survey in August of the same year showed that about 80% of the springs were either dry or their flow greatly reduced.

Nonetheless, even in dry times, a considerable number of springs dot the ranch, providing water for cattle, filling ponds, even influencing the type of vegetation that grows on the hillsides where water seeps out.

The Tallgrass Prairie National Preserve is probably typical of Flint Hills pastures, where water shows up in lots of locations, where it continues to be of high quality, and where it

goes on influencing the people, plants, and animals. All of these springs—the ones we know well and the ones with no names—are central to the landscape. And they help visitors better understand the Hills and why they are so remarkable.

*Rex Buchanan is Deputy Director of the Kansas Geological Survey. He is co-author of *Roadside Kansas* and *Kansas Geology*, both published by the University Press of Kansas.*

Bob Sawin is a Senior Research Associate at the Kansas Geological Survey. He is most recently the author of a map of the surficial geology of the Tallgrass Prairie National Preserve in Chase County.

Wayne Lebsack is President of Lebsack Oil Production, Inc., of Lyons, Kansas, and a current member and former president of the board of trustees of the Kansas Chapter of The Nature Conservancy.

*Buchanan, Sawin, and Lebsack previously published papers on Kansas springs in the *Transactions of the Kansas Academy of Sciences* and the journal *Kansas History*.*



EAGLE

NOTES

...for a time I rest in the grace of the world,
and am free.

Wendell Berry