

### CHAPTER THREE

# Springs and the Settlement of Pioneer Kentucky

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It was very common for 4 or 5 families to be settled together by some good spring. It was so here.  
And so Kentucky was settled.

—Samuel Matthews, early Kentucky pioneer (Draper 11CC157)

Kentucky is a land of springs. There are literally thousands upon thousands of free-flowing natural springs, large and small, across the length and breadth of the commonwealth. Small seeps and trickles may be found in all parts of Kentucky wherever there is fractured rock, but springs are most numerous and abundantly flowing in those extensive areas of the state where cavernous limestone bedrock is present. This is a type of landscape known as karst, where bedrock fractures have been dissolutionally enlarged by the circulation of groundwater to create complex networks of conduits fed by sinkholes and sinking streams, from which water discharges as springs. Nearly half of the land area of Kentucky is characterized as karst, including most of the Inner Bluegrass region and a vast area encircling the Outer Bluegrass from western Kentucky to the mountains of the east.

During the pioneer era in Kentucky, mineral springs and the most prominent freshwater springs served as landmarks in the wilderness, the focal points of a network of trails created by bison in search of salt and by the Native Americans who traversed the region in search of game and to trade with other tribes. The distribution of springs was in large part responsible for the pattern of settlement in pioneer Kentucky. Throughout human history, springwater has been perceived as superior in quality to that of any other source because it has been thought to issue in pristine form from the depths of the earth. A pure and reliable water supply was one of the most

important criteria for any potential settlement, and the early explorers and settlers were eager to claim land containing a significant spring, which became the site of pioneer stations and communities. The location of many cities and towns in Kentucky today, particularly those of the Bluegrass Region, can be attributed to the presence of a spring during the settlement period thought sufficient to supply the inhabitants.

Exploration of the country west of the Appalachian Mountains began in the 1750s, and the hunters, explorers, and surveyors who traveled through the region brought back reports of a rich land teeming with game: buffalo, bear, deer, elk, geese, and turkeys. Those who penetrated as far as central Kentucky described the country north of the Kentucky River as an earthly garden. The gently rolling landscape of the Inner Bluegrass region was a savanna woodland, deep, fertile soils lightly timbered with wide-spreading oak and ash trees mixed with meadowlands and thick stands of cane. Although many of the chronicles of these early explorers were more detailed and eloquent, surveyor Thomas Hanson succinctly captured the essence of the Bluegrass Country in his journal entry for July 1, 1774, describing the vicinity of Elkhorn Creek: "All the land we passed over today is like a Paradise it is so good & beautiful" (Hanson 1905, 129). Such reports generated considerable excitement in the long-settled lands east of the mountains, where soils had been depleted of their fertility and the

game had long since been hunted out. Travel through the western country was dangerous, but this did not deter potential immigrants, who came to Kentucky to carve out a new life in the wilderness (Wharton and Barbour 1991, 19–32; Aron 1996, 6; D. B. Smith 1999, 77–78).

The settlement of Kentucky took place between 1773 and 1792, at first as a trickle of hardy pioneers but soon as a flood of thousands of immigrants. The Appalachians were a formidable barrier that allowed only a few points of access to the western frontier, either by way of the Ohio River or through one of the few mountain passes. During the earliest years of settlement, few pioneers were hardy enough to risk the river route, where the threat of Indian ambush was a constant danger. River travel for large parties, requiring construction or purchase of a flatboat, could also be quite expensive, and so, although the land route was nearly as hazardous and the physical obstacles challenging, most early immigrants chose instead to make the long and difficult overland trek through the Cumberland Gap into the region. After 1783, when the danger had lessened, most settlers bypassed the mountains and came down the Ohio River in canoes and flatboats, putting ashore at the mouth of Limestone Creek (the site of present-day Maysville) or another of the river landings that served as thresholds to the Bluegrass. Either approach set pioneers on a network of trails that had been used for millennia by animals and Native Americans to traverse the region (O'Malley 1994, 19–20; 1999, 58–59).

A profusion of narrow pathways had been developed in the wilderness by deer and Native Americans, but the most prominent trails, called “buffalo traces” by Anglo-American settlers, were wide and well-trampled routes produced by the seasonal migrations of bison herds as they traveled between their foraging grounds and the many mineral springs of the region. Such trails had been in existence for millennia, as evidenced by the bones of prehistoric bison (immense shaggy creatures twice the size of modern bison), mastodons, and other extinct animals found by the early pioneers at locations such as Big Bone Lick and the Blue Licks (Hedeem 2008). Many animals, large and small, were attracted by the salt-encrusted earth on the margins of such saline springs, which were termed “licks” by the settlers of the region. Referring to

the salt springs of Kentucky, John Filson wrote in 1784 (32–33), “The amazing herds of Buffaloes which resort hither, by their size and number, fill the traveler with amazement and terror, especially when he beholds the prodigious roads they have made from all quarters, as if leading to some populous city; the vast spaces of land around these springs defoliated [*sic*] as if by a ravaging enemy, and hills reduced to plains.” Another traveler through central Kentucky, Nicholas Cresswell, observed in 1775 (1924, 85) that the buffalo “eat great quantities of a sort of reddish clay found near brackish springs. I have seen amazing large holes dug or rather cut by them in this sort of earth.”

The “Buffaloes” encountered by the pioneers were relatively recent arrivals to the Ohio Valley region. Before the sixteenth century, a combination of factors prompted movement of the plains bison into the eastern woodlands, including the Indian practice of setting fires to flush game and provide agricultural land that created, enlarged, and maintained prairie enclaves along the eastern margin of the Mississippi. The bison of the Southeast were never as numerous as those of the Great Plains, seldom gathering in herds of more than five hundred individuals, but their movements re-created the system of trails first developed by Pleistocene megafauna. These trails tended to traverse the ridges because the herds were reluctant to ford watercourses, with diversions from the trails to freshwater springs and canebrakes in the lowlands (Rostlund 1960; Jakle 1968, 1969; Belue 1996, 7–10). “The buffalo seldom visited the licks in the winter,” Nathan Boone wrote, referring to the hunting practices of his father, Daniel Boone. “They then would keep near the cane as the best winter’s range and lived in summer mainly on grass” (Draper 6S103). In the Ohio Valley, geographer John A. Jakle observed (1968, 302), the main objective of the buffalo was “always a salt lick, for basically, the traces were routes of maximum convenience connecting the larger salt springs.”

Eastern Kentucky is barricaded by two long, parallel ridges, each more than a hundred miles in length. The outermost of these ridges is Cumberland Mountain, which reaches elevations of 2,200 to 3,500 feet and is separated from Pine Mountain to the northwest, 1,800 to 2,200 feet in elevation, by little more than a dozen

miles. Few significant breaks interrupt these ridges. Immigrants could have crossed Cumberland Mountain at Pennington Gap, but there was no equivalent gap in the vicinity allowing passage over Pine Mountain. Settlers instead traveled forty miles farther south to the Cumberland Gap, where a fortuitous alignment of notches through each of the two mountain ridges allowed access to Kentucky. Here, the movements of large animals and Native Americans had for ages been funneled through the Cumberland Gap and along the Cumberland River through a water gap in Pine Mountain (the site of present-day Pineville), developing a well-marked trail. The Cumberland Gap thus became the primary gateway into Kentucky during the earliest years of exploration and settlement (Jakle 1968, 302).

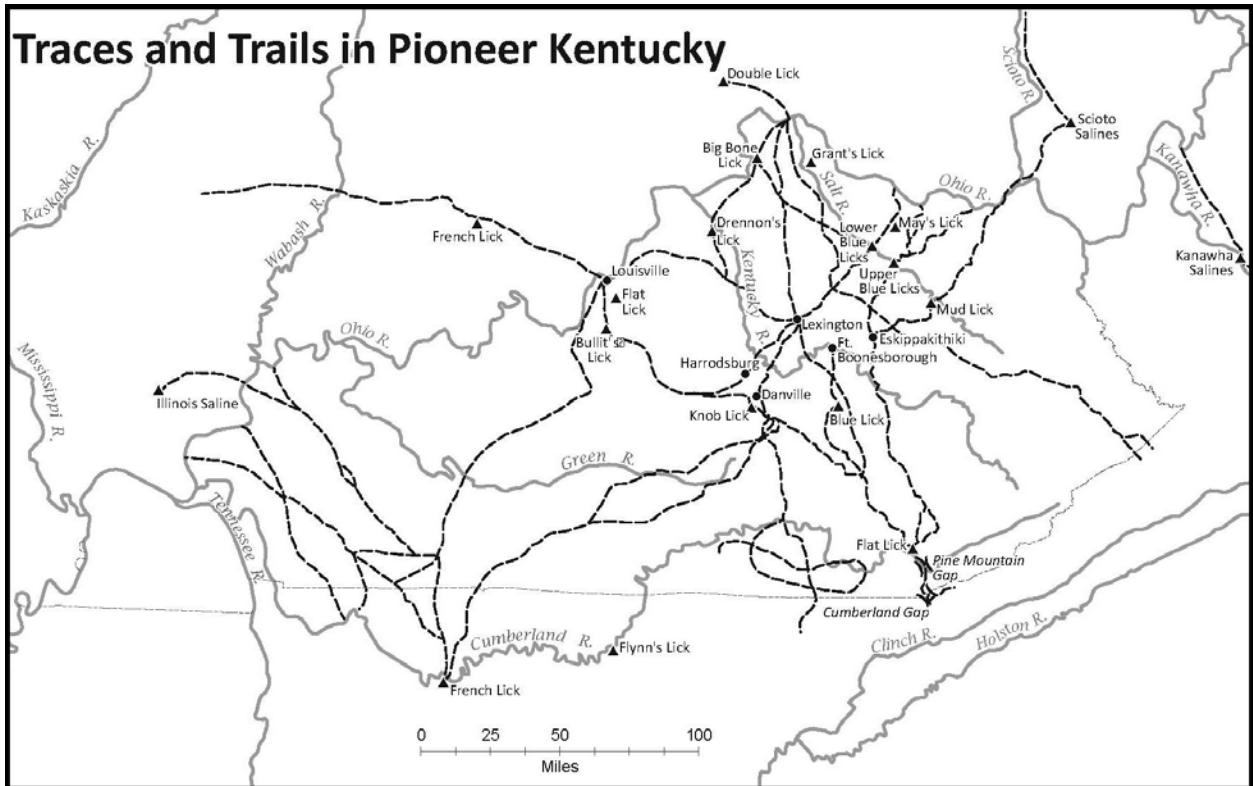
The buffalo trace forded the Cumberland River at the Pine Mountain gap and followed the river eight miles farther to Flat Lick, a relatively level area with several salt springs that was a junction of several major trails. Native Americans of the region frequented the primary spring to make salt and to hunt buffalo attracted to the lick. The notorious British officer Henry Hamilton, captured at Vincennes, Indiana, by George Rogers Clark's men, was brought through Flat Lick in 1779 on his way to captivity at Williamsburg, Virginia, and noted in his journal that here was "a remarkable Buffaloe salt lick." Hamilton also observed that the trees bore markings and characters made by the Indians to describe their various exploits, with the bark removed and the designs colored with red dye (Barnhart 1951, 198). The little stream in the vicinity was known as Stinking Creek, allegedly from the habit of hunters, Anglo and Indian, of leaving decaying carcasses and offal along the banks (Kincaid 1947, 70, 75).

Two primary trails split off from the vicinity of Flat Lick, the Warriors' Path and the Wilderness Trail. The Warriors' Path, a western branch of the long-established Native American trail, the Great Indian Warpath or Athawominee, that traversed the length of the Great Appalachian Valley from upper New York State to Georgia, was a trade and war route linking the tribes of eastern Tennessee with those of the mid-Ohio Valley. The Kentucky branch of the Warpath followed the bison trace across the gap to Flat Lick and then cut northward to Es-

kippakithiki (Indian Old Fields) in eastern Clark County, an abandoned Shawnee town located in the vicinity of several salt licks. The trail split again here, one fork running northwest to the Upper Blue Licks and on to the Ohio River, the other fork curving northeast and passing by Mud Lick (later renamed Olympian Springs) and Salt Lick in Bath County to the Ohio River opposite the mouth of the Scioto River, where the Indian community known as Lower Shawnee Town was located (figure 3.1) (Jillson 1934, 37-39; Kincaid 1947, 30; Jakle 1968, 302; Raitz, Levy, and Gilbreath 2010). These and other licks led explorers to bestow the name "Great Salt Lick Creek" on the river on which they were located, a designation later altered to Licking River. Thomas Hutchins, who came down the Ohio in 1766, later noted that "Great Salt lick-creek is remarkable for fine land, plenty of buffalo, salt-springs, white clay, and limestone. Small boats may go to the crossing of the war-path without any impediment" (Hutchins 1904, 95). The Warriors' Path mainly followed the river valleys, and some sections were developed along buffalo traces.

The Wilderness Trail also began at Flat Lick, although the entire route through southwestern Virginia and into Kentucky was soon known by this name by Anglo-American settlers, and later as the Wilderness Road. The trace only skirted the Bluegrass; it was not until Daniel Boone blazed a trail to Boonesborough in March 1775, departing from the existing trail in Rockcastle County, that there was a direct route from Cumberland Gap into central Kentucky (Kincaid 1947, 101-5). From Flat Lick, the trail followed hunters' paths and segments of buffalo traces to Knob Lick near present-day Danville and continued westward to the Falls of the Ohio, passing by Bullitt's Lick and Mann's Lick. Salt River, the major watercourse in this vicinity, was so designated because of these and the numerous other licks along its tributaries. The buffalo trace continued on the north side of the Ohio, opposite the falls, across southern Indiana to French Lick and crossed the Wabash River at the site of Vincennes (McDowell 1956; Jakle 1968, 302).

With the near elimination of hostile Indian activity in Kentucky by 1783, the Ohio River became the preferred entry route into Kentucky. The trail known to the Native Americans as Alanant-o-wamiowee or the Buffalo



3.1. Map of buffalo traces and trails used by the pioneers during the settlement era. Derived from trail maps in Jakle (1968) and Ulack, Reitz, and Pauer (1998). Cartography by Jeffrey E. Levy, Gyula Pauer Center for Cartography and GIS, University of Kentucky, Lexington.

Path followed a semicircular course through northern Kentucky from lick to lick, connecting two Ohio River landings at the sites of present-day Covington and Maysville (Jakle 1968, 302). This trail began at a ford near the mouth of the Licking River, used by the buffalo as they crossed into Kentucky from their winter range on the prairies of central Ohio. From the Ohio River ford, the trace headed southward to Big Bone Lick (Jillson 1934, 46). George Croghan (1904, 135), in his journal entry for May 31, 1765, described the appearance of the trace as his party of explorers approached Big Bone Lick: "We went to the great lick. . . . On our way we passed through a fine timbered clear wood; we came into a large road which the buffalos have beaten, spacious enough for two wagons to go abreast, and leading straight into the lick." The trail continued south from Big Bone, passing by Drennon's Lick to Leestown on the Kentucky

River just north of Frankfort. Filson (1784, 30) noted that the ford at Leestown was "worthy of admiration; a great road large enough for waggons made by the buffalo, sloping with an easy descent from the top to the bottom of a very large steep hill, at or near the river."

From Leestown, the trace veered east to a salt lick in Scott County, where several trails converged and the herds so trampled the earth in the vicinity that it became known as the Stamping Ground. The Alanantowamiwee continued to the Great Crossing of North Elkhorn Creek and passed through the site of Georgetown and on to Lexington. From downtown Lexington, the trace turned northeast, following the present Limestone Street and Bryan's Station Road, passing the pioneer fort known as Bryan's Station, and ran to the Lower Blue Lick and Mays Lick before ending at the mouth of Limestone Creek, the site of present-day Maysville (Hammon

2000, 129–31). Traveler James Smith (1907, 372) noted in 1795 that the old buffalo road between Lexington and the Lower Blue Lick was “generally 200 feet wide.”

There were, of course, many more buffalo traces in Kentucky than the few described here, and each of the major routes also had many branches and alternate courses. These traces guided much of the movement of pioneers during the settlement era and led to the establishment of farms, taverns, blacksmith shops, and other businesses near them, which in turn reinforced continued use of the same routes. Many modern highways and railway routes in Kentucky today follow or parallel trails and roads used during the initial settlement (Raitz, Levy, and Gilbreath 2010).

The saline springs of Kentucky represented valuable natural resources to both Native Americans and Anglo-American settlers. The relatively high population density of the mound-building Mississippian cultures has been attributed, in part, to the numerous saline springs of the region. The Native Americans apparently used salt only as a condiment, as there is no indication that it was employed in preserving meat or fish. Salt could be made by boiling the mineral waters in containers down to crystallization. During prehistoric times, the inhabitants of the region made salt in ceramic pans (figure 3.2), either by placing the vessel on a fire or by simply exposing it to the sun to evaporate the water (Brown 1980). After contact with Anglo settlers, many tribes obtained iron kettles by trade or as plunder during raids, finding them useful not only for cooking but also for more efficient salt making.

Unlike the Native Americans, who smoked rather than salted their meat for preservation, the American colonists were accustomed to a lot of salt in their diet. Salted cod, herring, pork, and beef were important staples in eastern communities (Kurlansky 2002, 217–18) but were not available to the early trans-Appalachian pioneers, who were dependent on the wild game of the region, such as deer and buffalo, salted, dried, or smoked. The explorers of Kentucky thus kept a sharp lookout for salt licks and springs, since the manufacture of salt would be essential for survival of the settlements. As the western country became more settled and the Indian danger subsided, salt manufacture became an important commercial industry.



3.2. This ceramic pan, 28 inches (70 cm) in diameter and 3 inches (8 cm) deep, was found during 1984 archaeological excavations of a Fort Ancient Native American site in Bracken County and is similar in type to those used to make salt at various saline springs. The Augusta site appears to have been occupied from about 1400 to 1730 CE. The artifact is curated at the Kentucky Office of State Archaeology (OAS) in Lexington. Photograph by Gary A. O’Dell.

The first commercial saltworks in Kentucky was established at Bullitt’s Lick in the fall of 1779, and it remained the most important saltworks in the state, employing hundreds of men at its peak, engaged as woodcutters, kettle tenders, water drawers, and teamsters (McDowell 1956). By 1790, saltworks had been established at most of the larger salt licks throughout the state. Salt making was dangerous work, and scalds and severe burns were common occupational hazards. It was also very destructive of the local environment, since it required cutting of large quantities of timber to feed the fires beneath the kettles. A large saltworks could swiftly create a zone of deforestation in the wilderness that covered hundreds of acres. Production from Kentucky’s major salt licks supplied salt to a significant portion of the midwestern region until the emerging industry at the Illinois Saline and, later, the Kanawha salines in western Virginia (near present-day Charleston), the strongest brines yet discovered, came to dominate the market in the early nineteenth century. The relatively weak brines of the Kentucky salines required far more labor to



3.3. Drennon's Lick in present-day Henry County was the site of a pioneer saltworks that operated intermittently from 1785 to about 1795. During 1994–5, the Kentucky Department of Highways conducted archaeological excavations and unearthed several iron kettles and furnace remains. Approximately 35 gallons (132 liters) in capacity, this kettle measures 26 inches (67 cm) in diameter across the top and 15 inches (38 cm) deep. The artifact is curated at OAS, Lexington. Photograph by Gary A. O'Dell.

produce a bushel of salt, and so the industry here was ultimately abandoned (Jakle 1969; Stealey 1993). Beginning about 1800, a few of the salt springs, including Olympian Springs (Mud Lick), the Lower Blue Lick, and Drennon's Lick (figure 3.3), achieved new economic significance when they were developed as health resorts, attracting travelers for the alleged curative powers of the mineral waters (Coleman 1955).

During the pioneer era, salt licks were certainly seen as valuable assets and thus were promptly claimed by immigrants but, with the exception of the vicinity of Bullitt's Lick, generally did not attract settlements. Salt was necessary, to be sure, but potable water was far more important to everyday life. If it was the location of the mineral springs that led to the establishment of a network of bison-generated trails, linking lick to lick, that guided pioneer explorations in Kentucky, it was the location of the freshwater springs in the vicinity of these trails that determined where actual settlements were made. Many of the earliest settlers were under the initial impression that the country was poorly watered—Levi Todd recollected that at Boonesborough in 1775, “we

then thought springs of water scarce and that the country would be thinly inhabited”—but they soon learned that clear and free-flowing springs were abundant throughout central Kentucky (Draper 15CC157).

As the most significant freshwater springs were discovered by the Anglo-American pioneers, they became reference points in the wilderness, serving hunters and explorers as navigational markers and locations for rendezvous with other frontiersmen. In the spring of 1779, for example, John Pleakenstalver, Ralph Morgan, and a few others set out from Boonesborough to the vicinity of Elkhorn Creek and along the way “encamped at Todd's spring,” where Colonel John Todd had erected a cabin (Collins 1878, 2:179). Like the salt licks, freshwater springs were also good places to wait in concealment to bag a deer or other wild game. Josiah Collins, one of the men who, in April 1779, helped erect the first fort at Lexington, recalled having trouble finding the spring where the settlement was to be located: “The old woodsmen about Boonesborough directed us how to find the camp. Old hunters knew where the spring was we were to build at. In truth they knew just where we were camped, and every big spring through the country, and just the place where this was” (Draper 12CC100).

The Native Americans, who had been hunting in the region for generations and were well acquainted with the springs of Kentucky, used some of the same tactics on the pioneers that had been successful in hunting game for the larder. A raiding party might lie quietly at a well-known spring for hours or even days to ambush some luckless frontiersman as he came to drink (Withers 1831, 144). In the summer of 1780, a year after helping raise the Lexington blockhouse, Josiah Collins and a companion, Thornton Farrow, were approaching Hugh McGary's station on Shawnee Run in present-day Mercer County on an errand from the commander at Lexington. Although Farrow claimed to have seen an Indian on the bank of the Kentucky River at the mouth of Shawnee Run, Collins scoffed, and believing themselves secure, recklessly they “lay down our bellies and drank” from a spring a few hundred yards from the settlement. No harm befell them from this, but Farrow had been correct, and the two men had been followed. On the very next day, a man named Hinton, who had gone out to tend his field, was

ambushed and killed by Indians when he drank from the same spring (Draper 12CC68).

Beginning about 1773, the region that would become Kentucky was invaded by a horde of would-be settlers as well as land speculators, who began to choose and survey prime tracts of land. Most of the initial claims were of lands in the central, or Bluegrass, region of the state; other areas were settled later. The land claims were made on the basis of crude surveys, which might constitute no more than corners marked by blazing or girdling trees or carving initials into a tree or on a boundary rock, and through “improvements,” such as clearing an acre or two and planting a corn crop or constructing a rough cabin. Surveys of these lands were based on the “metes and bounds” system, which consisted of bearings and distances from one physical landmark to another, and land parcels were further identified by the primary watercourse draining the land. Certificates were awarded by the Virginia government to those settlers who could establish a legally valid claim, and many of the certificates contain references to karst features. There was a well-developed terminology used by the pioneers to describe such features as springs, “sinking springs,” “lick springs,” “boiling springs,” “blue holes,” “cave springs,” and the like.

Since it was often difficult in the wilderness to locate markers for someone else’s survey or even to determine whether the land had been claimed at all, a host of conflicting claims arose. In 1779, the Virginia government sent a commission to Kentucky to judge the land claims and resolve the conflicts, which issued certificates for valid claims. A typical certificate might include a description such as the following, issued by the commission seated at St. Asaph’s (Logan’s Fort) on April 22, 1780:

Andrew Steele having obtained Certificate for preemption of 1000 Acres of land in the District of Kentucky [in] February 1780 now comes into Court and makes it appear that he is intitled also to a settlement by Virtue of raising a crop of Corn in the year 1776 lying about 2 Miles up from the mouth of Steel run waters of the South fork of Elkhorn to include a large Rocky Spring & his improvements ordered that a certificate issue accordingly. (Kentucky Historical Society, 290)

The uncertainty concerning overlapping claims led to a profusion of litigation that occupied Kentucky courts

for decades and enriched a generation of lawyers. An example from the court records is indicative of the nature of depositions in the trials and the importance of springs to settlers claiming land. On April 5, 1801, Samuel Boggs made the following statement in regard to a claim in present-day Scott County, Kentucky. In his deposition, Boggs made clear the competitive nature of land claiming and that settlers were well aware of problems with potentially conflicting claims:

That in year 1776 this deponent in company with William Lindsay deceased and others made an improvement by building a cabbin at the Cave spring where Henry Lindsay now lives which improvement was made for William Lindsay . . . also made several other improvements on the run above and below the Cave spring to keep other people from making improvements that might interfere with those at the Cave spring and this place. (Fayette Circuit Court, *Complete Record Book A*, 381)

The case of the initial settlement of Royal Spring, the site of present-day Georgetown, illustrates both the routes taken by early immigrants into the region and the importance attached to springs as settlement sites (figure 3.4). The spring was first discovered in 1774 by John Floyd, deputy surveyor for Fincastle County, as Virginia’s Kentucky lands were then known. In mid-April, William Preston, the official surveyor and sheriff of the new county, sent the young man across the mountains to the west to survey lands under military warrants, one of three such parties he dispatched at about the same time (Cartlidge 1968, 325). As chronicled by Thomas Hanson, a member of the party, while surveying lands in the vicinity of North Elkhorn Creek, Floyd decided to take a short break on July 9 and, with William Nash, “went in search of a spring, which they found.” Hanson described the spring as “the largest I have ever seen in the whole country, and forms a creek by itself.” During the following two days, the party surveyed 1,000 acres around the spring for John Floyd, breaking camp on July 21 and setting out for a rendezvous at the cabin of James Harrod (Hanson 1905, 129–31).

In late October 1775, Robert Patterson “left the Pittsburg country . . . with John McClelland and family and six other young men for the promised land, Kentucky” (Draper MM, 16). John and Alexander McClelland,



3.4. In 1775, the Royal Spring in Scott County was chosen as the site of McClelland's Station, one of the region's earliest pioneer settlements. Although the station was soon abandoned, the community of Georgetown was founded on the same location, and the spring today still serves as the town's primary water source. The photograph shows the appearance of the spring circa 1888. Source: Kentucky Department of Libraries and Archives.

William McConnell, Francis McConnell Jr., Andrew McConnell, and David Perry had just returned from an exploring trip that had set out the previous April and had spent several months surveying and making improvements in the vicinity of Elkhorn. William McConnell had first explored the Kentucky lands in 1774 and, as the most experienced, was probably the leader of this party (Collins 1878, 2:178). The McClelland party knew exactly where they were going to establish their settlement. John McClelland had very likely discovered Floyd's Spring during his explorations of the Elkhorn region a few months earlier and was unaware that the land around the spring had been surveyed and claimed by John Floyd.

The party of ten men and one woman set off from Pittsburgh, some in canoes, into which they had loaded such goods and supplies as they thought necessary to set up households in a new land, while others kept pace along the bank of the Ohio, driving a few head of live-

stock. These were the first stock imported into Kentucky, nine horses and fourteen cattle. In November, after a journey of nearly 400 river miles, the party reached the mouth of Salt Lick Creek, presently the site of the community of Vanceburg, in Lewis County, Kentucky (Draper MM16-21; Fayette Circuit Court, *Complete Record Book A*, 307-13).

Here the party divided, arranging to rendezvous in a few weeks at Leestown, a buffalo ford of the Kentucky River located about a mile north of where Frankfort would later be established. Most of the party, including the McClellands, remained with the canoes and continued down the Ohio River, planning to turn up the Kentucky River and follow it southeastward to Leestown. This would require an additional journey of about 230 miles by water. Patterson, William McConnell, and Stephen Lowrey bade farewell to the McClellands and, led by David Perry, turned their steps away from the Ohio



River, driving the cattle and horses and scouting ahead for the best route for the animals. They headed almost due west, following Salt Lick Creek for a time, crossing Cabin Creek (in present-day western Lewis County), advancing to Stone Lick (now Orangeburg in Mason County, about nine miles southeast of Maysville), and striking the old buffalo trace at Mays Lick (Mason County) that led from the Ohio River to the Lower Blue Licks. They crossed the buffalo road, continued west a few miles until they encountered another trail known as the middle trace, and then turned southward and followed the trace to the Lower Blue Licks. Here Patterson and company ran into Simon Kenton and John Williams, who told them that they knew of no other white person then in the country (Draper MM67–68, 15C25.9–25.10, MM16–21).

Herding the livestock, they crossed the Licking River at this point and traveled westward along another buffalo trace that led to Hinkston's Station (just south of Cynthiana in Harrison County), from there following Townsend Creek southwest to yet another buffalo trail. This trail took them westward to Leestown on the Kentucky River, passing very near Floyd's Spring along the way. The drovers had managed to reach the rendezvous ahead of the McClelland party and there waited for them several days; when the canoes arrived and the separate groups were reunited, they lost no time in striking off to the east, following the same buffalo road back to Floyd's Spring. At this spring, which was renamed Royal Spring, the men established what became known as McClelland's Station, erecting a fortified house (Draper MM17). In May 1776, after John Floyd learned of squatters at his "big spring," he went to see John McClelland, "determined to drive them off, but on seeing his wife & three small children, who must have been distressed, I sold it for £300" (Draper 33S298). Tragically, before the sale could be finalized, John McClelland was killed during an attack on the station at the end of the year.

The majority of pioneer habitations were of the sort termed "stations," similar to that built by the McClellands at Royal Spring. These were more substantial than the primitive pole or log "cabins" constructed as necessary "improvements" to legally secure land claims, which were small, crude, and hastily built. Such improvement cabins were never intended to be occupied on anything but the most temporary basis, if at all. Stations, in con-

trast, were in general sturdily built log houses that could be barricaded in event of attack, erected singly or in clusters for common defense for a group of families. Picket stockades consisting of logs placed vertically in the ground were erected at some sites as a further line of defense, often including exterior cabin walls as part of the enclosure. Even the stations, however, were considered only temporary abodes that would be replaced by something more durable when the hazards of the country had been reduced. Large military outposts, or forts, with blockhouses at the corners, were built at Boonesborough, Harrodstown, Lexington, and St. Asaph's (present-day Stanford). These forts differed from stations in that they were sizable complexes intended to house numerous families and military personnel and provide regional administration and services; they also served as points of refuge for outlying stations when activity by hostile Native Americans became particularly severe (O'Malley 1994, 23–29).

Although the land was chosen for its soil quality, sites for station and fort construction were selected on the basis of two important criteria: the defensibility of the location and access to a reliable source of potable water (O'Malley 1999, 61). Every station settlement in central Kentucky was situated near one or more freshwater springs. Sites adjacent to the larger and more prominent springs of the region, particularly those near the trail system, were settled first. For travelers on the frontier, as the region was settled, forts and stations quickly replaced the explorers' springs as navigational waypoints, with the exception of the more prominent licks, such as Big Bone, the Blue Licks, Bullitt's, and others.

In every case, the fort or station was constructed at a short distance from the water supply rather than being situated next to the source or including the spring within the stockade enclosure. Although this practice has long puzzled historians, since persons collecting water would be exposed to attack, there were apparently some very practical reasons for it. If the spring were located in the residential area, traffic by people and livestock would soon transform the area around the water supply into an unpleasant mire, and the presence of mosquitos could be a significant annoyance. Another consideration was that nearly all the larger springs were located in valley bottoms, whereas ridgetops were more defensible and, for

that reason, were preferred habitation locations. Valley bottoms, being prone to flooding by surface streams, would also be undesirable residential locations (O'Malley 1994, 36). In a study of the water-supply practices of a modern-day, self-supplied, rural population in a region of southeastern Kentucky lacking a public water system, O'Dell (1996, 88–92) found that accessibility, reliability, and perceived water quality were the most important criteria determining which springs were used for household domestic water needs.

Although this situation might pose a hazard in obtaining water during a time of active hostilities with the Native Americans, it was deemed necessary in most cases to avoid potential fouling of the water by proximity to the population. The risks associated with conveying water from a spring that was not secured within the stockade were somewhat reduced, when possible, by clearing away the intervening brush and trees to provide a clear field of fire from the dwelling place. Separation of source and residential area did not necessarily ensure that the spring and its environs would be kept clean. Before the late nineteenth century, there was no comprehension of the role of microbes in transmitting waterborne diseases, only a vague perception that sickness was somehow connected to “filth,” and notions of sanitation were rudimentary at best. On a visit to Harrodsburg in February 1780, where the spring was outside the fort but close to the populated section, Colonel William Fleming noted with considerable distaste the condition of the water supply serving that community:

The spring at this place is below the Fort and fed by ponds above the fort so that the whole dirt and filth of the Fort, putrified flesh, dead dogs, horse, cow, hog excrements and human odour all wash into the spring which with the Ashes and sweepings of filthy Cabbins, the dirtiness of the people, steeping skins to dress and washing every sort of dirty rags and cloths in the spring perfectly poisons the water and makes the most filthy nauseous potation of the water imaginable and will certainly contribute to render the inhabitants of this place sickly. (Fleming 1916, 630)

Even after the country had long been settled, sanitation remained a problem at the springs that supplied communities with water for drinking and other needs. On August 15, 1790, the trustees of Lexington published

an order in the *Kentucky Gazette* that “the public spring on Main Street and the one near the school house, no longer be used as washing places.” Apparently, no one paid much attention to this notice since, on July 3, 1795, the trustees threatened to prosecute “anyone doing washing at the public spring” (*Kentucky Gazette*).

As the country grew more populous, the original large tracts claimed by pioneers were divided and divided again and resold to newcomers. Real-estate advertisements of the era were certain to emphasize the presence of a spring, a desirable feature that increased the value of the land. These springs were invariably described as “never-failing,” as in the case of an advertisement placed in the *Gazette* on December 7, 1793, by James Dunwiddie, who wished to sell two hundred acres located six miles north of Lexington. On this property were “two never-failing springs near to the buildings, which are a dwelling house twenty by eighteen, and two other cabins, the whole of hewed logs.” John Bradford, publisher of the *Gazette* in Lexington, advertised for sale on April 24, 1804, the house and town lot on which he resided, noting the presence of a brick spring-house, from which the flow “never fails in the driest season,” and in the backyard of the same lot, another “never-failing SPRING of cold water . . . equal to any in the state.” Most springs used as household water supplies, both rural and in towns, were eventually enclosed by spring-houses or other structures intended to protect the source and to provide cool storage for produce and dairy products.

As time went by, many of the original forts and stations were abandoned, but others more fortunately situated continued to grow and became the towns and cities of present-day Kentucky. It is a safe assumption that every significant community in central Kentucky, including Lexington, Georgetown, Versailles, Stanford, Lancaster, Paris, and many others, owes its location to the presence of a spring used as a water supply by the original settlers of the region. As the population of these communities grew, a single spring usually proved insufficient to meet the increasing demand for water.

In Lexington, the first effort to increase the flow of the “public spring” by enlarging the opening was made in January 1783; resident Martin Wymore recalled that they “dug that in farther, and more, and it got stronger, as they went farther into the bank” (figure 3.5). This eased the problem only for a short while, and soon the citizens set



3.5. Historical tradition holds that the site of Lexington was named in 1775 when a party of explorers, camped at an attractive spring in the Bluegrass region, first heard news of the opening battle of the American Revolution at Lexington, Massachusetts. Although the town spring that once served Lexington as a water supply was long ago buried by urban development, McConnell's Blue Hole, the explorers' campsite, was preserved. Now a city park, the spring tract serves both to celebrate Lexington's beginnings and as an outdoor education center. Photograph by James R. Rebmann.

about digging at all the wet-weather seeps along the banks of Town Branch. The seeps, said Wymore, "gradually opened, and new springs broke out all along the bank" (Draper 11CC131). Communities were in time forced to develop other water-supply sources; since there were no public distribution systems, individual households were required to dig wells or collect rainwater in cisterns to meet their own needs. By the beginning of the twentieth century, community-based public systems based on artificial reservoirs were being developed to supply water to citizens of the largest towns (O'Dell 1993).

With few exceptions, most of the springs that formerly supplied early settlements that later grew into substantial communities have disappeared as a consequence of urban development (figures 3.6 and 3.7). A few Kentucky communities, such as Georgetown and Elizabethtown, still rely on the same karst springs that determined their original settlement. In most rural areas of the state, how-

ever, springs have retained use value and have persisted in the landscape. Most of these springs presently serve to water livestock, although their primary historic function may formerly have been domestic supply. Many rural households today continue to depend on springwater for domestic use where public water-system infrastructure is lacking, even in parts of the relatively affluent and densely populated Bluegrass Region.

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3.6 and 3.7. Many springs that inspired the founding of pioneer settlements and served as initial water-supply sources were later destroyed or covered by urban development, as in the case of Lexington. For some modern communities, brief glimpses of the flow may be seen, as at Glasgow (upper photo). Other Kentucky towns have endeavored to preserve the settlement spring, as in Versailles, where the town spring, although not used as a water supply, still flows freely from a low cave opening behind the courthouse (lower photo). Photographs by Gary A. O'Dell.

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