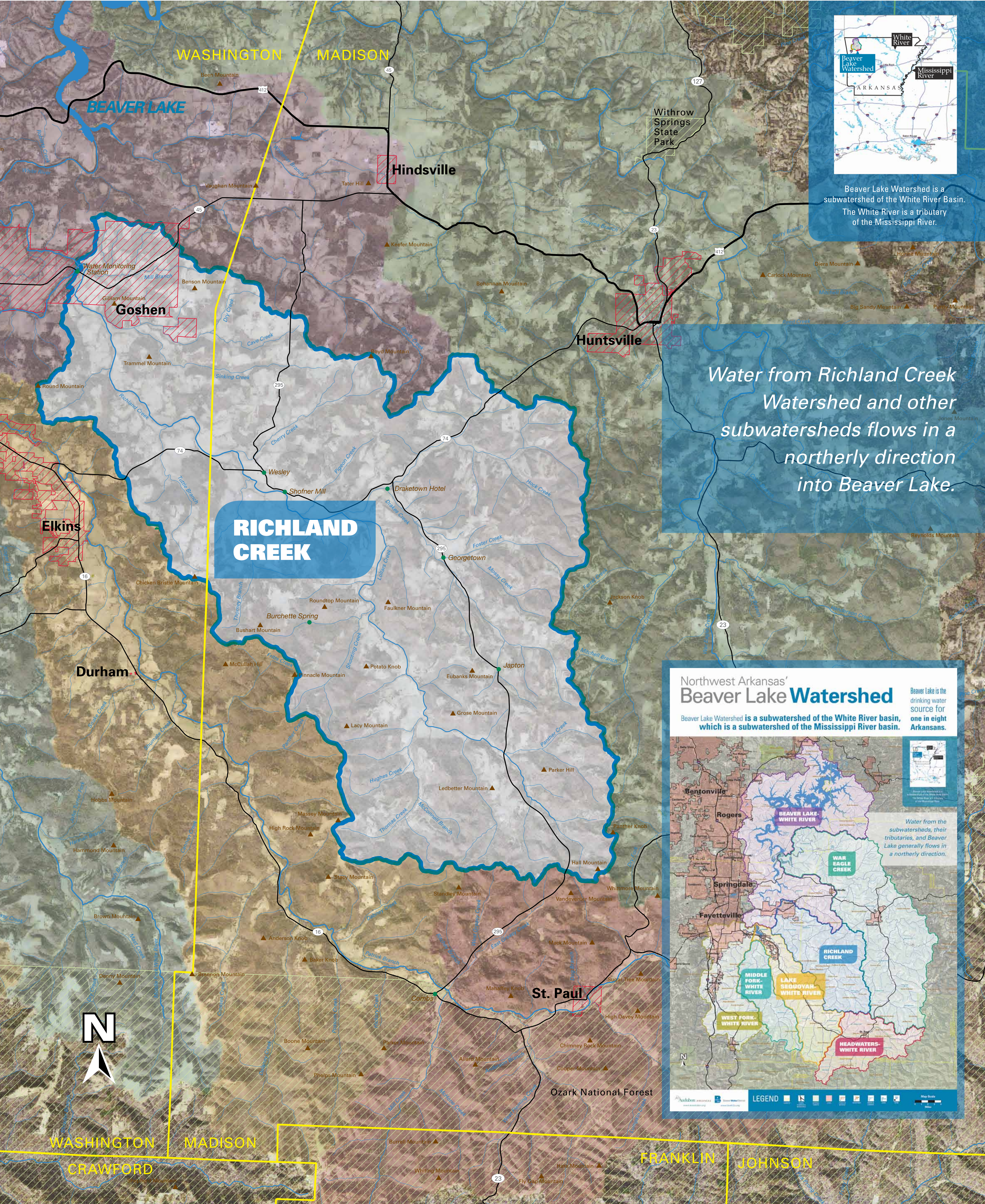


Northwest Arkansas' Richland Creek Watershed

Beaver Lake is the drinking water source for one in eight Arkansans.

Richland Creek Watershed is one of seven subwatersheds in the Beaver Lake Watershed. Beaver Lake Watershed is a part of the White River Watershed.



Richland Creek Watershed

Why is the watershed important?

Did you know that what happens in a watershed doesn't stay in a watershed? What you do on the land affects water quality, and in Northwest Arkansas, that means Beaver Lake. This map focuses on Richland Creek Watershed, which is characterized by rural farming communities (28 percent of the land cover), forest (64 percent), herbaceous and barren or bare soils (7 percent of land cover), and urban growth in the lower reaches of the watershed (1 percent). Take some time to know your watershed and help us protect this great asset for future generations.

Source: 2004 UIA East Project.



Richland Creek in Washington County.

Photo courtesy of Harold Hull (digitaleymages.com)



Beaver **Water**District
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Canning in the Ozarks

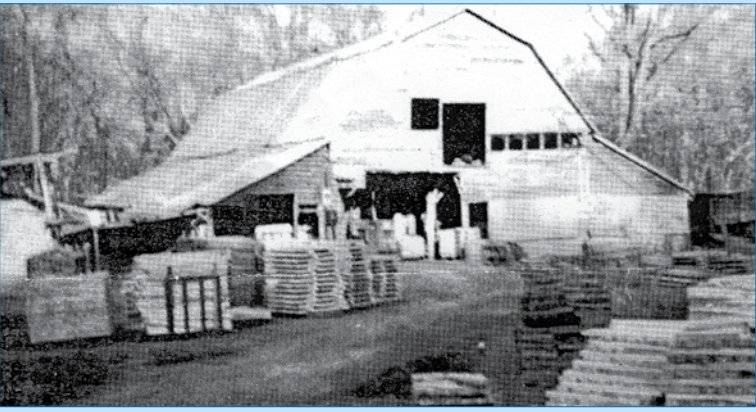
A Richland Creek Legacy

Settlers came to the Richland Creek area and found what some described as a new and rich land flowing with milk and honey. The rich alluvial soil and abundant water allowed families to grow a variety of crops. In the late 1800s and early 1900s, these small farmers found that canning their crops was well suited to their lifestyle. Canning produce was an ideal supplement to the family income allowing families to make money selling their crops to the cannery and also receive an income working in the canneries. It was fairly easy to set up a cannery, and at the turn of the 20th century, canneries began popping up all over the Ozarks. Almost every community in the Richland Creek watershed was home to a canning factory.

The produce supplied to canneries usually came from within a 10-mile radius of the cannery. The close proximity allowed for fruits to reach the canneries at prime ripeness and with little damage from transportation. The seasonal range of products started with strawberries and included green beans, cabbage, blackberries, and especially tomatoes. By the 1920s, tomatoes were the dominant crop canned in the region and were referred to as the "red gold of the Ozarks." Every year during tomato harvest, tens of thousands of Ozarkers worked to pick and process a large portion of the tomatoes packed in the United States. A worker in a cannery in Wesley described his job this way: "I cooked the tomatoes, timed 'em, put 'em in vats, had a crane that let 'em down in steel baskets. I thought it was pretty good, 20 cents an hour." They were packaged in a variety of forms, including whole tomatoes, sauces, and catsup and marketed all over the United States.

While canneries thrived through the early 1900s, the economic factors of the Great Depression, climatic factors of drought in 1930, the short labor supply during World War II, and a shift away from small-scale family farming caused most canneries to shut down. A few of the former canning factories have found new uses, like the former Japton and E.M. Johnson canning factories. The former Japton cannery, which was built by the Spurlock Brothers in 1924, is now home to the volunteer fire department that serves the 65-square-mile

Sources: Red Gold of the Ozarks, Tom Dicke, Agricultural History, Winter 2005. Fading Memories: A History of the Lives and Times of Madison County People.



The former E.M. Johnson Canning Factory

Photo courtesy of Madison County Genealogical & Historical Society

area surrounding the small community. The former E.M. Johnson Canning Factory is still owned by the same family but is now the Richland Handle Company. While exploring Richland Creek Watershed keep an eye out for the many remnants of canneries — whether it is an overgrown building, a completely dilapidated structure, or a cannery site which has a newfound use, they are all part of the Richland Creek Watershed heritage.



Canning is an Ozark tradition.

What is a Watershed?

What does it contain?

A "watershed" is the area of land that catches rain and snow which drains or seeps into a marsh, stream, river, lake, or groundwater. Tributaries are smaller streams that flow into other larger streams.

Watershed protection is a key piece of the ecosystem puzzle. Watershed conservation encourages proper land use and uniform protection of tributaries within the watershed.

Watersheds contain:

- o Businesses
- o Industries
- o Farms
- o Forests
- o Homes
- o Lakes
- o Pastures
- o Riparian zones
- o Rivers
- o Streams
- o Wetlands
- o Wildlife



Photo courtesy of Massachusetts Executive Office of Energy and Environmental Affairs

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Water and Fire Protection

A Collective Resource in Rural Northwest Arkansas

Most rural fire departments are staffed by volunteers who reside within the fire service area, known as the fire district. Volunteers receive professional training and certifications that provide them with the knowledge and skills necessary to keep rural communities safe. In addition to the difficulties associated with funding for needed equipment and personnel, many rural fire department leaders consider access to water one of the biggest challenges they face. Water is serious business, not only because we need it for drinking, sanitation and agriculture, but also because it provides protection for our homes and lives. Water is critical to rural fire protection.

There are seven rural fire departments which serve the Richland Creek subwatershed. Located in Goshen, Wesley, Japton, Elkins, Round Mountain, St. Paul, and Bohannon Mountain, volunteer fire personnel carefully

plan access to water in their districts. Collectively, these departments provide fire protection to more than 145 square miles within the watershed.

In urbanized areas of the state, extensive water infrastructure allows easy access to nearby fire hydrants in the event of a fire. In contrast, rural fire departments work with smaller water lines that are unable to sustain a large number of hydrants. Advanced planning is essential to ensure quick access to hydrants during emergencies. In addition, rural fire departments depend on large tanker trucks that can hold thousands of gallons of water. Structure fires typically require multiple tankers. One tanker will supply water to the fire engine that firefighters use to spray water on the fire, while others shuttle water to the scene from the nearest hydrant, which is sometimes miles away. Most rural departments have entered into mutual aid



Goshen fire captain Brett Freeland (right) and firefighter Justin Hayes pump water from a tanker truck during a training exercise.

Photo courtesy of Miranda Vinay

Water is serious business...it provides protection for our homes and lives.

Which Richland?

Two Ozark Treasures

Mention Richland Creek in a conversation with someone from Arkansas, and what comes to mind is likely the Richland Creek, the one that Kenneth Smith refers to in his classic book "Buffalo River Country." The Richland Creek made famous in that iconic classic, first published in 1967 and credited with sparking a movement that resulted in the Buffalo River being designated the first-ever National River in the United States. The Richland Creek of Newton County. The Richland Creek that the tourists and the hikers and the canoeists all know and love. But there is another Richland Creek. This other Richland Creek is located in Madison and Washington counties. From a watershed standpoint, it is contained within Richland Creek Watershed, a subwatershed of the larger Beaver Lake Watershed, which is itself a subset of the Upper White River Watershed. While it may not be as well known or as exciting as its famous cousin, this Richland Creek is significant, if only for the fact that it is one of many tributaries whose waters wind up flowing into



Richland Creek in Newton County, a tributary to Buffalo River.

Photo courtesy of Harold Hull (digitaleymages.com)

Beaver Lake. And that's something to be mindful of, since Beaver Lake is the drinking water supply for one in eight Arkansans. To find this other Richland Creek, simply travel state highway 74 east of Elkins. Or meander west on state highway 74 from Huntsville, if you like. Access Google Earth or a GPS application and make an afternoon of it. Explore this little known jewel and its environs. Take photographs. Gather information about the flora and the fauna. Take a water sample. Pick up trash along the way and do your own little stream cleanup. Share your experiences with your friends and neighbors. Pay tribute to another of nature's wonders.



Richland Creek, a tributary of Beaver Lake, near Hwy. 45 in Washington County.

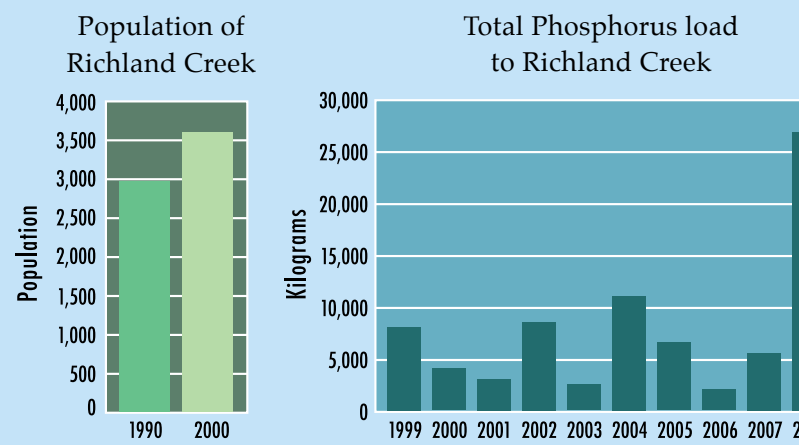
Photo courtesy of Miranda Vinay

Water Quality in Richland Creek

Issues Facing a Rural Watershed

Homes in Richland Creek Watershed rely on septic disposal systems, so potential water quality concerns include impacts from effluent from these on-site wastewater disposal systems. This is important to note, since it is critical to protect drinking water sources from bacterial contamination. Good rules of thumb include pumping your septic system regularly and checking to see that your drainage area is doing its job to treat effluent. That's going to depend to a large degree on the types of soil.

Other water quality concerns include the potential for increased nutrients and sediment in the lower reaches of Richland Creek because of the significant acreage in pasture and the increase in residential subdivisions. To keep a check on water quality, there are two legacy water quality sites and one active U.S. Geological Survey gage and water quality monitoring site. USGS gage 07048800 was installed in 1998 to monitor flow, and in 2001, the USGS began collecting water quality data as well.



The population of Richland Creek Watershed increased by 26.1% between 1990 and 2000, according to data from the U.S. Census.

The Total Phosphorus load to Richland Creek at the USGS monitoring station varied from 2,420 kilograms (kg) in 2006 to 26,800 kg in 2008. This shows the impact of storm events on the total load of pollutants in this watershed; 2006 was a year of major drought while 2008 had near record rainfall.

Source: Susan E. Bolyard, Jeanne L. De Lamois, and W. Reed Green, 2010. Constituent Concentrations, Loads, Yields and Streamflow to Beaver Lake, Arkansas, 1999-2008. USGS, Reston, VA.



Regular septic tank maintenance is an important part of water quality protection.



Photos courtesy Clifton Eoff

Streams and Rivers

The Highways of Our History

Waterways have played a crucial role in the settlement and development of Arkansas and our nation as a whole. Native Americans and European explorers both used waterways as travel corridors to explore, trade, and settle North America. Settlers would follow a river or stream, surviving on its bounty until they found a suitable area to homestead. The rich alluvial bottoms of the Richland Creek watershed offered healthy soil and bountiful resources for settlement. Settling near water provided a source of power for gristmills and sawmills, along with water for daily use in homes and gardens.

Before railroads, roads, and highways, streams and rivers were used for navigation and also served as a way to give directions to your home or business. Stream names were important and often named for the family who lived on the stream, landmarks, species, or features one would see

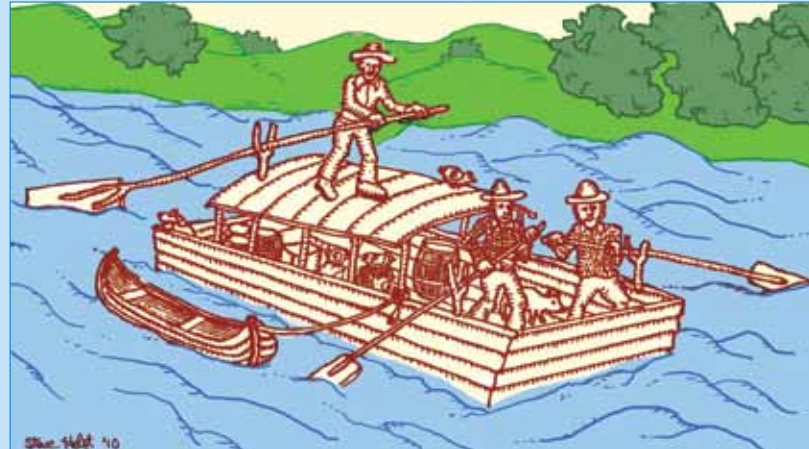


Illustration by Steve Holst

while traveling the waterway. Panther Creek, Sinking Creek, Shooting Creek and all the streams of the Richland Creek Watershed have a story behind their names. Go explore these creeks and see if you can discover how they got their names!

The History of Draketown

A Once Busy Mill Community

Nestled among the lush forests and fertile pastures of the Ozark Mountains, hundreds of small towns and villages exist, each with their own history and legends that add to the undeniable charm of the region. Some are thriving communities, while others have faded into mere shadows of once illustrious pasts. Located within the Richland Creek Watershed, Draketown has become one of these shadows, with only a few crumbling foundations and the old Drakes Creek Hotel (now a private residence) hinting that a once bustling town existed here.

The name Draketown originated with the Drake family, who made the journey from Tennessee and settled the area in 1830. In the years that followed, more relatives and families arrived, and a small village blossomed where Drake Creek and Hock Creek converge. Accounts of town life suggest a close community, where farmers and their families would come into town on weekends to have crops processed, help one another with various projects, and occasionally gather for community meals.



Drakes Creek Hotel and Burt Mitchell Store, Drakes Creek, about 1910.

Courtesy Shiloh Museum of Ozark History / Jo Lewis Collection

By the latter half of the 19th century, Draketown had become one of Madison County's most thriving towns, in part due to the fact that it had several steam-powered mills. The flour mill, grist mill, and sawmill all used water from the two creeks to power steam-run operations, which eased the mechanization process, in



Draketown Hotel, Draketown, 1981.

Courtesy Shiloh Museum of Ozark History

turn making production more efficient and helping to sustain the local economy. In addition to the three mills and still-standing Drake's Creek hotel, the town also had two blacksmith shops, a saddlery, a post office, a school, a bank, and at least two general stores.

By the 1930s, like so many other places in the Ozarks, Draketown was unable to withstand the myriad of pressures brought on by the Great Depression. Families simply could not cope with the economic hardships, and they began moving away with the hopes of carving out a new life for themselves elsewhere. As families disappeared, so did the heart and soul of the town, and its final years were signified with the closing of the post office in 1954.

Though Draketown no longer exists in the concrete sense, its stories and folklore live on in spirit through the novels of the late author Donald Harington, whose best known work may very well be "The Architecture of the Arkansas Ozarks." His mother, Jimmie Walker, was a native of Draketown. Donald spent nearly every summer of his childhood there with his grandparents, where he listened to captivating stories and tall tales. These stories, the people, and the town are said to be the inspiration for fictional Stay More, Arkansas, which makes an appearance in many of his works. It is with these colorful and humorous stories that Draketown will survive long after what is left today completely turns to dust.

Big Bills, Big Appetites

The Belted Kingfisher and Greater Roadrunner

Richland Creek is covered in diverse habitat that appeals to birds. Two interesting, medium-bodied birds, that capture our attention when sited, are the Belted Kingfisher and Greater Roadrunner. Both of these attractive birds are notable for their relatively large bills and similarly expansive diets.



Belted Kingfisher Ceryle alcyon

Photo courtesy of Gail Miller

The Belted Kingfisher lives at the boundary of air and water. From a choice perch above a waterbody, it sits and scans for prey. One of the few Arkansas birds capable of hovering, you may see the Kingfisher suspended over the water before making a dramatic plunge while diving for prey. As the name suggests, kingfishers eat mainly fish, but also enjoy mollusks, crustaceans, insects, amphibians, reptiles, small mammals, and even birds. One way we know about their diet is by examining pellets they regurgitate like owls do. You're more likely to hear a kingfisher before you see it; they usually give a loud, rattling call at the slightest disturbance.

Water quality is very important for kingfishers. They require clean, clear water so they can see fish just below the surface. Kingfishers may be absent where water is muddy, or where overgrown shoreline or aquatic vegetation obscures the view. To build a nest, kingfishers need vertical exposed earth, usually along a streambank. Using their feet, both sexes excavate a burrow 3 to 6 feet long with an unlined nest chamber at the end. There, eggs are safe from predators and hopefully flood waters as well.



Greater Roadrunner Geococcyx californianus

Photo courtesy of Don Nelms