

Ozark Society Bulletin

Winter 1980-81



Shagbark Hickory — Neil Compton

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PACK AND PADDLE

Newsletter, Ozark Society, Inc., February 1981
(First Issue)

(This new Society-wide newsletter will be published at least bi-monthly and we need the cooperation of all members to keep it lively and interesting. Please send any news items to Second Vice President Bob Ritchie, P.O. Box 3155, Little Rock, AR 72203, who is serving as business manager for the publication. We can't promise publication of everything sent, but, subject to editing, we'll try...EDITOR.)

From Pack and Paddle, February 1981:

THE PRESIDENT'S CORNER Bill Wiggins

Prompt communications with its membership is the lifeblood of any organization and this newsletter, "Pack and Paddle," is our attempt to bolster the excellent feature and essay vehicle we have in the Ozark Society Bulletin. The Bulletin, is the heart and soul of the Ozark Society. It is where we express our philosophy of maintaining a high quality of life via in-depth features and essays about places we hold dear from the Louisiana bayous to the mountains of Arkansas, Oklahoma and Missouri. But the Bulletin is, of necessity, a quarterly publication not geared to handle fast-breaking news events, outing schedules, and other news of a timely nature. This newsletter will provide us that flexibility and free the Bulletin for more scholarly, timeless and detailed treatment of the environmental issues that concern us.

ANNOUNCEMENT

The Spring meeting of the Society will be held April 11-12 at Devil's Den State Park near Fayetteville. This year our "rendezvous" will be more of an all-Society campout, with formal programs kept to a minimum. This meeting will provide us with an opportunity to just be together, get better acquainted with each other, relax, and enjoy the attractions of this outstanding park. Mark your calendars now. . .we'll have more details later.

Arkansas River

Stewart Noland

A great deal has been written and said as of late about the usage of Arkansas River water for municipal, industrial and agricultural purposes. The concern for the development of water supply sources for these consumptive purposes is well founded since many areas in Arkansas are experiencing water supply problems. This general shortage of water has become a more acute problem in the summer of 1980 because of the drought conditions we have experienced. In the future, shortages of water will be caused more so by increasing demands for water and not necessarily by weather induced shortages. For those and nearby communities lying along the Arkansas River the interest in using the Arkansas River for a water supply source is well founded, particularly if the alternatives are closely considered.

Although many cities such as Fort Smith and Van Buren, Clarksville, Russellville, Dardanelle and Morrilton, either have or will in the fairly near future need to develop additional water supply sources, the City of Conway as an example has most recently been faced with a water supply problem. Reviewing the development of Conway's new water supply (which is currently under construction) will give one an excellent example of an alternative and its impacts to using the Arkansas River.

Upon completion the McClellan-Kerr Arkansas River Navigation System raised the water level of the Arkansas River to such a height that a new protective weir was constructed on Cadron Creek, Conway's water supply, to normally prevent Arkansas River water from topping the weir and mixing with Conway's water supply pool. The new weir was constructed to prevent "high chloride content" Arkansas River water from mixing with the Cadron Creek water supply; an item to be discussed further. The new weir raised the water supply pool by ten feet and by doing so caused water to spread into low lying areas adjacent to the water supply pool. As a result, algae blooms were stimulated in the water supply pool resulting in a degradation of the water supply. The presence of certain amounts of algae in a water supply can impart taste and odor to the supply which can remain in the water even after water passes through conventional water treatment facilities. As a result of this algae related water supply problem, which can itself be treated by certain treatment procedures, the Conway Water Supply Project was authorized by Congress in Public Law 93-251. The Water Resources Development Act of 1974 amended the McClellan-Kerr Arkansas River Navigation System project "to include the alteration at Federal Expense of the municipal water supply facilities of the City of Conway, Arkansas, by the construction of water supply impoundment facilities at a location outside the flat flood plain of Cadron Creek, together with interconnecting pipeline and other appurtenant works, so that the water supply

capacity of the resultant facilities is approximately equivalent to that existing prior to the construction of the navigation system." The alternative chosen to meet the intent of the amended act included the construction of an earthfill dam on Cypress Creek in Conway County which is to yield 16.75 million gallons of water per day. The reservoir will inundate about 1,165 acres of land and require the purchase of 2,465 acres. About 60,000 feet of raw water pipeline will be installed to transport the untreated water to Conway. A state highway and two county roads will have to be relocated along with about 19 homes, one cemetery and one business. At this point in time the reservoir will serve as the water supply source only for the City of Conway, with a population of about 20,000. The total estimated project costs amount to \$23,100,000.

It is important to note that **none** of the six alternatives to the proposed project, as explained in the final environmental impact statement, addressed the possibilities of using the Arkansas River as a water source. The costs associated with using the Arkansas River as a water source at Conway would have been miniscule compared to the estimated cost of the proposed project, which is currently under construction. In addition, no land would have had to have been purchased from private land-owners, no land would have had to have been inundated by the reservoir, taken out of production and irreversibly committed to the project, and no homes, businesses, cemetery, roads and highway would have had to have been relocated. Why then was the Arkansas River not considered as an alternative?

The final EIS, authored by the Corps of Engineers, states that choosing a non-structural impoundment alternative would be in conflict with the letter of the law of their enabling legislation for this particular project. This statement is subject to discussion, however, since the Arkansas River Navigation System itself is comprised of a series of impoundment facilities, one of which, the Toad Suck Ferry Lock and Dam, could serve the City of Conway if the Arkansas River were used as a water supply. Even though the need for this project was originally and ultimately linked to the construction of the navigation system, the navigation system, and the Arkansas River itself may have been able to provide the solution to the purported water supply problem.

The reason the EIS did not address the Arkansas River as a potential water supply can possibly and partially be traced to Arkansas Department of Health policy. In similar water supply studies in the Russellville and Fort Smith areas, and possibly others, the possibilities of developing the Arkansas River as a water source have similarly been dismissed because of the so called poor water quality of the river itself and because, in the opinion of the Health Department, superior water quality supply sources are

available. It is with this question of availability that many people disagree. In the true sense of the question, yes, better water quality supply sources than the Arkansas River itself are available within the Arkansas River Valley. Barring ground water potential these alternatives take shape as the upland tributaries lying on both the north (Ozark Mountain) and south (Ouachita Mountain) sides of the Arkansas River. Because many of these tributaries drain relatively small watershed and because most depend almost entirely upon rainfall events for the runoff, they are not normally able during dry months or dry weather to supply dependable, adequate supplies of water for treatment and distribution. The most common alternative has been to dam the main stream of these tributaries to effectively store in the resulting reservoir an adequate supply of water for treatment and use. As previously discussed Conway's execution of this common alternative was to dam Cypress Creek, a stream relatively unknown to the general public.

However, when discussing tributaries **available** to other communities and their surrounding areas lying along the Arkansas River the interest of the general public will likely become more aroused. For example: Lee Creek and its proposed Pine Mountain Dam for the Fort Smith area, Spadra Creek for the Clarksville area, Illinois Bayou or Big Piney Creek for the Russellville area, and Point Remove Creek for the Morrilton area. The metropolitan Little Rock area will eventually be faced with a water supply problem also. These and other Arkansas River tributaries are the more superior water quality supply sources in comparison to the Arkansas River that the State Health Department alludes to. Because of other values that these free flowing streams represent to the people of Arkansas and surrounding states it may not be in the best interest of the State of Arkansas to quietly but decisively dam one each time a water supply source problem occurs along the Arkansas River. If these streams do represent a valuable resource in their unaltered state, and even though they do represent a better quality of water, why has such a cursory glance been given the Arkansas River as a potential water supply in studies performed for Conway, Russellville, Fort Smith and other areas?

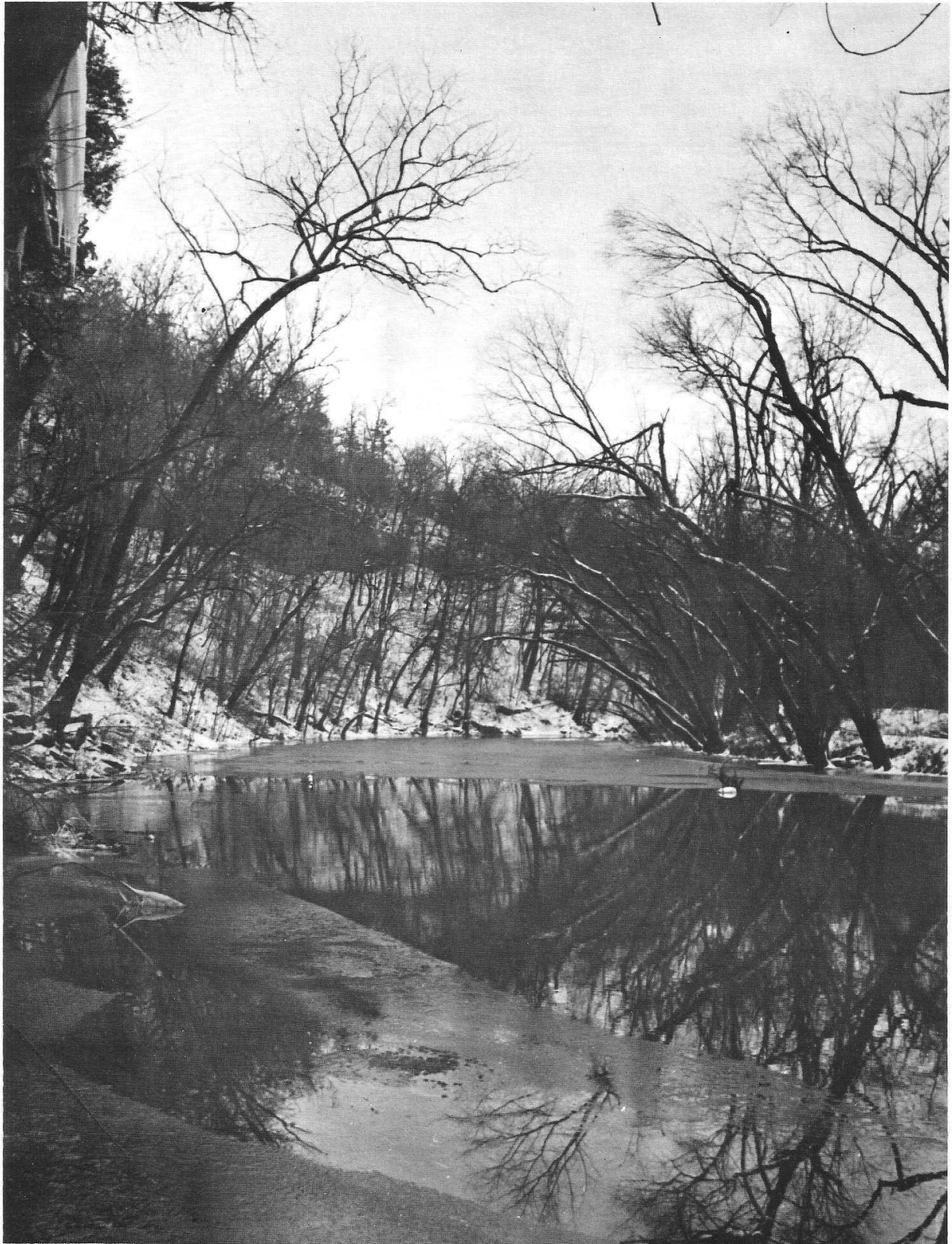
In years past the Health Department has cited high chloride levels in the Arkansas River as a basis for deeming it an unacceptable water supply. Since 1945 chemical analysis data have shown a general decrease in chloride concentration from several hundred milligrams per liter (mg/l) to levels generally in the range of 50 - 100 mg/l. Chlorides impart a salty taste to the water. Drinking water standards as published by the United States Public Health Service list 250 mg/l as the preferable upper limit for chlorides. As far as these standards are concerned chlorides are not a problem in the Arkansas River at this time. As a matter of fact, recent analyses show that the Arkansas River water has generally been in compliance with all the parameters listed by the most recent Safe Drinking Water Act (PL 93-523) except for certain organic chemicals more commonly known as trihalomethanes (THM). However, the THM requirements have come under close scrutiny since their

inclusion. Many people have challenged whether or not the presence of certain amounts of THM's actually represent an unreasonable health risk. As a matter of fact the cornerstone of the water-works industry, the American Waterworks Association, and two water companies have filed a suit challenging the establishment of certain THM requirements. If the THM regulations are finally adopted water treatment facilities throughout the United States will face rigorous upgrading programs at great costs to be passed on to their users. Other site specific problems have been identified by the state Health Department in developing the Arkansas River as a water supply source. However, none of these problems seem to generate a situation that cannot be overcome by either the enforcement and/or implementation of existing regulations or through cooperation. If usage of the Arkansas River as a drinking water source seems impractical or unwanted because the people of Arkansas have traditionally and historically viewed the river as a sewer, perhaps looking at existing water supply sources outside the state will help to enlighten us. For instance the cities of St. Louis and New Orleans use the Mississippi River as their primary water source. In addition the Ohio, Missouri and other industrialized rivers are used as water supply sources. The Mississippi River at New Orleans truly represents the so called sewer of the central portion of the United States and yet is used as a water supply for hundreds of thousands of people. We should not necessarily compare our situation in Arkansas to those in more populated and industrialized areas, but my point is that, considering the alternatives, we should more closely consider the Arkansas River as a water source in the future and use it to its fullest potential.

Another point to consider about the use of the Arkansas River for drinking water purposes is that it would in many cases only be needed as a supplemental source. Most of the upland tributaries maintain a flow sufficient enough to meet their areas' needs during a majority of the time in a given year, and in some years possibly all of the time. Even during those periods of time when the Arkansas River water was used it would constitute a blending of waters from the Arkansas itself and the primary source of water. Since in many cases for only short periods of time would the Arkansas River water be used the higher costs of treatment sometimes associated with treatment of the river water would in reality either be short-lived or possibly non-existent. The cost required to construct water intake structures on the Arkansas River would be **much** less than the costs associated with damming and transmitting water from the upland tributaries. This factor, needless to say, is of utmost importance to industrial and municipal water users as they will ultimately repay these costs.

To consider what effects the future possibly holds for the water quality on the Arkansas River is certainly a prime consideration should we consider it further as a water source. No doubt, and hopefully so, the amount of goods being shipped by barge on the river will increase in the future. The increase in tonnage shipped on the river might be considered a

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Marshall Ford, Kings River — Neil Compton

Backpack and Reflections on The Buffalo River

Paul Means
Conservation Chairman Pulaski Chapter

In wintertime, the Buffalo River Country is empty. The steep ridges are grey and barren, covered with trees that, like empty cupboards, have no leaves hanging from their branches. Long stretches of the riverbed are dry and dusty, the water drained away by the long summer and dry fall. No buzzards circle over the valley, no cattle graze in the fields, and the ever-present automobile is nowhere in sight. Boarded up roadside stands and closed gas stations give a ghost town feeling to the seldom travelled highway. It is as if man and nature have abandoned the valley to the bright blue sky and cold wind. Tired of the inactivity and crowds of the holiday season, Robert Booth, my wife Sherry, and I sought out the peace of emptiness and set out to backpack the upper Buffalo River from Fallsville down to Boxley.

After one false start in the New Year's Eve darkness, we found the Forest Service road running west from Highway 21 just past the Sullivan Cemetery, about one mile north of Fallsville. The old, nearly impassable road has been improved to an all-weather gravel road that runs to within fifty yards of the river, and much to our delight, we were the only people there and would not have to share the hike with anyone else. I stepped from the car to look up at a moonless sky filled with wisps and swirls of star clouds shining against an absolutely black background. Spending my time in a city looking at a sky diluted by street lights and lighted parking lots, I had forgotten how the stars filled up the sky. Like an entranced shaman of some primitive tribe, I stood soaking up the vastness of the heavens and the magnificence of the stars, and had the cold not interrupted the trance and sent me digging for a coat, I may have watched the sky until dawn.

We awoke on New Year's Day with numb feet on what turned out to be the only painfully cold morning of the trip. One by one, we pulled on our boots and hobbled down to the river to stand in the first patch of sunlight created by the sun climbing over the ridge. Following the retreating shadow, we basked in the warm light until it reached the car, and after a chilly breakfast, eagerly shouldered our packs and started hiking in an attempt to thaw out our feet. It felt good to be on the trail, especially when my feet began to warm up.

The trail is actually an old road that legend has it, once followed the river from Fallsville to Boxley. Like most wagon roads, it followed the contours of the valley, staying to the low bank of the river to avoid the bluffs, requiring only that trees be cut down to make a road. This road building technique results in innumerable river crossings and made us glad that the water was low and rocks for hopping were plentiful. A forty pound pack on your back on a cold day can turn rock hopping from child's play to a nerve-racking experience. The pack not only

upsets your balance, but also adds to your momentum so that it can take two steps to stop after a jump to a one step rock. The art to crossing a stream with a backpack is to plan which foot will land on which rock from one bank to the other, and rather than crossing one jump at a time, you must charge across in continuous motion to avoid that extra step into the water. The thought of the cold water inspired each of us to perfection even though we were out of practice.

In the first few miles there were reminders of the people who had once used the road and lived in the valley. Long, low walls of grey rocks stacked upon each other enclosed pine and cedar trees that had reclaimed the old fields. The hours of labor required to lift and carry each rock to the wall were unthinkable, perhaps when their children got underfoot, pioneer mothers harnessed the boundless energy of children by sending them to the field to make rock walls. A small spring welled up in a little room of mossy rock walls, the old spring house where milk and butter were kept cool. Later we found a rectangular rock foundation with a short chimney at one end, speculating that it was used to cook sorghum molasses. As the forest covered the old homesteads, we often lost the road and certainly did not see all that remains of the old farms.

Previously, Robert had made this hike in two days, but because of the long weekend, we planned to cover the fifteen miles in three days. Our first camp was to be in a field at Terrapin Branch where an old chimney still stood, and by late afternoon we could see by the outline of the ridges where Terrapin Branch flowed into the Buffalo. At the same time we encountered a growth of thorny rose bushes so thick that they formed a fence around the old field. Seeking a path, Robert headed towards the river — not that way; I tried up the ridge, not that way either. Facing the problem head on, Robert gingerly picked his way through the fence using a stick in one hand to hold back the thorny branches and the other hand to carefully pull off those that caught on his clothes. Sherry and I followed slowly, and after wandering through a maze created by clumps of roses scattered across the field, we found the chimney at one end of a grassy clearing on the river bank. After a hot supper, we sat and watched the stars come out and I imagined a pioneer wife watering and lovingly tending a few rose bushes growing in front of her dirt floored cabin, the one bit of color and civilization in her drab and wild surroundings. If only she knew how well they had done on their own. As the temperature fell we sought the warmth of our sleeping bags and a long night's sleep.

The hollow of Terrapin Branch runs east to west, allowing the sun to shine on our tent early, and

despite the heavy frost and frozen water in our canteens, we felt warm. The rose fence behind us, we merrily went forth on the second day of the trip. The track of the old road soon disappeared, but the walking was still easy as we moved through groves of virgin beech trees and an open forest floor. Many of the trees had names and dates carved into the bark, some so disfigured by the growth of the tree that they were no longer legible, although I did decipher a date as early as 1944. Disgustingly, there were also names and dates as recent as 1979. After a couple of miles in the beeches, we entered a thickening stand of young hardwoods and discovered an abandoned deer camp. Apparently worn out by the long hike down the ridge from the end of the old road through Mossville, they had left a lot of equipment behind, including metal plates, an old coffee pot, a pair of old boots, a plastic milk carton, and lots of trash. A plastic bag with the bottom torn out flapped forbiddingly in the breeze at the end of a piece of robe thrown over a branch. It was easy to imagine the hunters being massacred by Indians or vaporized by a UFO, but in reality, the only explanation for the mess was laziness and a lack of respect for the land.

Robert had warned us on several occasions that a tornado had blown down some trees up ahead and that the going would be difficult for a stretch. We soon discovered that it was worse than difficult and that it would take four hours to cover the next two miles. The tornado had levelled everything in the valley floor, creating a natural clearing that was soon filled by brambles and young, six to ten foot trees growing so close together that the thicket was almost impenetrable. According to Robert, it had grown up some since his last trip. We did not walk through the thicket, but rather pushed, shoved, stumbled, and cursed our way through. Progress was measured in units of one or two steps, stop and find an opening wide enough to slide through with a pack, and advance two more steps. Soon I could not see where I had been or where I was going, and often lost sight of Robert and Sherry, even though I could clearly hear them crashing through the brush. Branches constantly caught on my pack frame and with every step I had to tug to pull the pack through the tangle, usually causing a branch to slap me in the ear or face. Beavers had left short stobs scattered through the thicket, and it seemed that everytime I closed my eyes to avoid a branch, I tripped over a stob. Both Robert and Sherry took falls. Our faces stinging from the slapping branches, the tripping, and constant tugging on our packs wore us out both mentally and physically. Twice we crossed the river only to find more thicket. The main topic of conversation was broad, open trails that we had hiked and how long it would be until we found the old road again. As the sun began to set, we reached Dug Hollow and found an old campfire by the river. Exhausted, we dropped our packs and made camp for the night. About sixty feet from the river was a small clearing where we set up the tent, and then fixed supper in the gathering dark down by the river. Too tired to care, we left stoves, pots, and trash at the river, went up the hill, and crawled into our sleeping bags. There was general agreement that because of the thicket it was no longer possible

to make the hike in two days and we were lucky to have planned on three. I fell asleep with the nagging worry that there was more thicket to come tomorrow.

With no insects to chirp, no birds to twitter, no leaves to rustle in the breeze, and no water to murmur over the shoals, it is quiet at night during the Ozark winter. The silence and my sleep were both interrupted by the hoarse bark of a coon dog, soon joined by a high pitched yap and the moanful baying of a hound. I listened as the three dogs trailed and then, as the barking became more frantic, treed the coon no more than a quarter mile downstream. The firecracker sound of a .22 cal. rifle told me that the hunters had caught up with the dogs. The thought crossed my mind that it must not be far to some sort of good trail if hunters were in here, and trying to go back to sleep, I was awakened again by a light playing across the tent. I heard quiet voices and footsteps down by the river, and remembered the trash as someone loudly scolded a dog, "Get out of there!"

I considered getting up to see what was going on, but it was too cold and I knew the hunters would move on, the voices and steps were already heading back downstream. Robert whispered, "What was that?"

"Coon hunters," I replied and drifted off to sleep content in knowing that a trail was near and the ordeal of the thicket was over. We all three awoke the next morning in much better spirits than when we retired, and Robert headed down to light a stove while I dug breakfast out of the pack. Following Robert, I met him coming back up the hill.

"Did you leave your stove down there?"

"Yes, why?"

"Well, it's gone."

My enthusiasm for the day was gone, replaced by the anger and frustration of being robbed. Without hot chocolate breakfast did not seem appetizing, so we packed and headed for Boxley feeling tired and ready for the hike to be over. Within a mile we found the old road and by noon reached the Hedges place. In hopes of finding a ride we walked up to the house, but they were not home, so we left our packs by the woodpile and walked out to the highway to hitch a ride.

Hitchhiking on Highway 21 is chancy at best, if for no other reason than there is not much traffic, and the first few cars to pass actually sped up when the driver caught sight of us. I guess one does look a little rough after three days of hiking, but fortunately, a fellow backpacker came by, and recognizing us for what we were, gave us a ride. We retrieved the car, then the packs, and headed home to hot baths and soft beds. I would like to thank Margaret and Harold Hedges after the fact for their hospitality in letting us eat lunch on the porch and stash our packs while we hitchhiked.

Now that I am home and warm, and enough time has passed for the hike to become an adventure, the memory of the ordeal of the thicket has faded and remaining are the sharper memories of the sight of a beaver swimming in a pool of clear water, the smell of clean air on a frosty morning, the sound of wind roaring in the pines, and the feel of warm rocks in the

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Crowley's Ridge — A True Arkansas Geological Oddity

by John Fleming, deceased, a former Ozark Society member
and a staff writer for the *Arkansas Gazette*
Arkansas Gazette, Sunday, May 11, 1969
Abridged with some additions by the Editor

In this era of fast transportation, motorists traveling on the dozen of so improved east-west highways across Arkansas's Northeast quadrant are hardly aware that they pass over a geological freak of nature that was millions of years in the building.

This geological oddity is known as Crowley's Ridge and it was named for one Benjamin Crowley, a pioneer Arkansan who moved early in the 19th Century from the area of Old Davidsonville in Southern Randolph County on the Black River to a location in what is now Greene County. Crowley built his new farm on the top of a spine of land that runs from well into Missouri to the Mississippi River at Helena.

It is presumptuous, of course, for a layman to attempt to describe in less than 2,000 words an act of nature that began millions of years ago. However, in view of the fact that thousands of persons live on the Ridge and within its environs and other thousands pass over it every day, it seems proper that some simple explanation be attempted. The standard text on Crowley's Ridge is Volume 2 of the annual report of the Geological Survey of Arkansas for 1889. The author was R. Ellsworth Call. There is a foreword by Dr. John C. Branner who was then the state geologist.

It may appear that a 90-year-old report would be out of date but apparently this is not the case and for a good reason. Crowley's Ridge, in the geological sense, is of recent origin. Recent origin is the Tertiary Period which began approximately 70 million years ago and ended about one million years ago. It stands to reason, therefore, that, comparatively, the year 1889 was relatively merely a few seconds ago.

Geologist Call divided Crowley's Ridge into two separate sections for discussion purposes. The arbitrary dividing lines is the line that also divides Craighead and Poinsett Counties. South of Craighead County the Ridge averages from one to three miles in width with a maximum of six miles. North of the dividing line the Ridge widens out to an average of about 13 miles and as great as 24 miles.

How did this 140 mile Ridge of land get where it is?

Dr. Branner, in his foreword to Call's technical report, explained that in Tertiary times the predecessor of the Gulf of Mexico covered most of Texas, all of Louisiana, most of Mississippi, much of Western Tennessee and most of Southern and Eastern Arkansas. (All of the ground upon which Little Rock now stands was covered with water. This sea extended above what is now the mouth of the Ohio River at Cairo, Ill.)

Toward the close of the Tertiary Period this great ocean began to recede. Naturally, the Mississippi River kept flowing into the receding sea but not any-

where near its present course. In fact, there were two main streams—one on the west of what is now Crowley's Ridge and another on the east. Sometime in the Pleistocene Epoch of the Quaternary Period, the Mississippi River cut its way to the east leaving only smaller streams such as the White, Black and Cache Rivers on the west of what is now the Ridge. This was somewhere in the vicinity of a mere one million years ago.

There is no evidence that Northeast Arkansas was directly involved in the glacial periods of the Pleistocene but the floods that took place during this epoch made their contribution to the building of Crowley's Ridge by depositing great masses of dirt and rock that was carried in from the north.

Geologist Call reported that "Crowley's Ridge is, then, the residual product of long continued erosion. It is in no sense an upheaval, nor does it, in Arkansas, contain a rock of crystalline character or of Paleozoic age (570 million to 260 million years ago). Its existence is due to the resistance it has offered to erosive forces which have leveled the greater part of the region. It stands now as a silent witness to a history so wonderful that the imagination is taxed by any attempt to compass all its details."

(Call wrote 142 pages of details.)

In the 1889 explanation of the formation of Crowley's Ridge there is no mention of the wind yet the thick top soil of the Ridge is loess. In fact, one geologist is quoted as saying positively that the loess is water deposited.

Later, however, the theory has been propounded by modern geologists that much of this loess was wind deposited. The Ridge itself formed a kind of dust fence that stopped dirt and dust carried by the prevailing winds.

There is nothing really spectacular about Crowley's Ridge. It isn't like an odd shaped mountain, a mesa or a butte. It isn't something that you would drive to Eastern Arkansas to see but it is interesting to inspect when you happen to be there.

U.S. Highway 62 crosses the Ridge between Piggott and Corns. State 90 crosses between Knobel on the west and Rector on the east. State 25 goes over the hump between Walnut Ridge and Paragould. U.S. 63 crosses Crowley's Ridge in a north-west-south-east direction between Walnut Ridge and Trumann. State 14 goes over between Waldenburg and Marked Tree. State 42 crosses between Hickory Ridge and Coldwater. U.S. 64 crosses between McCrory and Earle. Interstate 40 and U.S. 70 roll over the Ridge in the Forrest City vicinity. U.S. 79 crosses in the vicinity of Marianna and U.S. 49 goes over the tail of the Ridge between West Helena and Helena.

Going up Crowley's Ridge in a south-north direction provides an interesting trip for the outdoor enthusiast. From the Helena-West Helena the traveler takes Forest Road 1900 past Storm Lake and across the saddle of the Ridge to Bear Lake on the north end of the St. Francis National Forest. On this pretty road through the Forest one sees the effect of erosion—an action of water and wind that is noticeable all along the 140-mile length of the Ridge.

From Marianna to Jonesboro, State 1 follows along Crowley's Ridge most of the way and then State 141 leads to Crowley's Ridge State Park, once the farm of Benjamin Crowley and his

(Continued on Page 10)

Grant to Monitor Weyerhaeuser

The National Wildlife Federation has received an \$18,732 grant from the Winthrop Rockefeller Foundation to establish a panel of wildlife and forestry experts to monitor the Weyerhaeuser Company's forestry practices on two million acres of timberland in Arkansas and Oklahoma.

The "blue ribbon" panel will give a professional, unbiased opinion on what effects Weyerhaeuser's timbering has on wildlife and the environment, and will suggest what improvements, if any, can be made. Establishment of the panel is the result of an agreement NWF, the nation's largest conservation education organization, made with Weyerhaeuser last spring. NWF, which owns 1,800 shares of Weyerhaeuser common stock through its endowment fund, had filed a shareholder proposal to be voted on at the timber company's April 17, 1980, annual meeting.

The proposal asked Weyerhaeuser to adopt guidelines to protect wildlife and wildlife habitat. In addition, it asked the timber company to leave hardwood buffer strips along streams to provide habitat diversity and protect water quality; to make smaller clearcuts with irregular borders separated by uncut areas, which would also provide habitat diversity; to leave standing some dead trees for cavity dwellers and nesters, and nut-bearing trees for wildlife food; and to reduce erosion from logging roads.

CROWLEY'S RIDGE (Continued from Page 8)

burial place. Here there is swimming in a big lake, fishing, camping, picnicking and an opportunity to study the odd geological formation of the area.

State 141 northward through Beech Grove to the junction with State 135 gives the tourist an excellent opportunity to see the buildup of Crowley's Ridge. The Ridge rises to the east and to the west is the rich farming land of the Cache Valley.

If you want to spend a day looking over Crowley's Ridge the time would not be wasted. All things considered a day isn't very long when you consider how long it took nature to create this Arkansas oddity.

By the Editor:

John's statement that the Ridge acted as a dust fence is a good explanation for the accumulation of the loess. The occurrence along the Ridge in Arkansas is shown on the Geologic Map of Arkansas. Loess covered the Ridge from Helena to within a few miles of Jonesboro. From there north to the Missouri line, and across the bootheel of southeast Missouri to south of Cape Girardeau, silt and sand containing reworked loess covers much of the Ridge.

The ancestral Mississippi River and paralleling streams extended themselves as they followed the retreating arm of the Gulf seaward eroding the consolidated Cretaceous and Tertiary sediments to form the Ridge which was positioned by a combination of accident, gradient, and the presence of joints or faults which helped delineate the pattern of erosion.

Tertiary rock, which underlies the loess and sandstone in Arkansas is well exposed in Missouri, and the underlying Cretaceous rock crops out from near Bloomfield to the Mississippi River. The Cretaceous sediments lap up onto Ordovician outliers of the Ozarks with many formations between having been eroded away before Cretaceous deposition. The Tertiary beds dip southeastward and have been beveled by erosion, the higher beds being present near Helena and gradually eroded away northward with lower beds coming progressively to the surface.

At its annual meeting Weyerhaeuser assured the NWF that it was about to adopt similar guidelines and plans. In return, NWF withdrew its shareholder's resolution.

With the support of the Winthrop Rockefeller grant, the NWF has begun to select panel members. Panelists will include a wildlife biologist, a water quality expert, a forest engineer, a fisheries biologist, and a forest economist. According to NWF attorney Thomas Lustig, who will interview potential panelists, "The economist will ensure that panel recommendations can be adopted by Weyerhaeuser without significant financial losses. We of course understand that Weyerhaeuser is in business to make a profit, but we believe that the company can make money and still protect wildlife habitat."

Lustig explained that NWF first learned of Weyerhaeuser's controversial forestry practices from local conservation groups and the Oklahoma and Arkansas Wildlife Federations, two NWF affiliates. The local groups were alarmed by the extensive clearcutting of mixed pine and hardwood forest, followed by replanting with pure pine, a practice that greatly reduces the value of the habitat for wildlife. They were also concerned by the increased amount of silt in formerly clear streams and its effect on the native small-mouth bass.

Lustig praised Governor Nigh of Oklahoma and former Governor Clinton of Arkansas for their efforts which helped lead to the establishment of the blue-ribbon panel.

He also noted that Weyerhaeuser has been very cooperative and may have already altered some of its practices in favor of wildlife. "Our panel of experts should provide an independent assessment of just how good a job Weyerhaeuser is doing," he said.

The loess was formed during the Pleistocene (Ice age) by the grinding action of the glaciers on the underlying rocks as the thick ice moved southward as far as the Missouri River. The glaciers began to melt back around 20,000 years ago leaving the "rock flour," which when dried out, was carried by the wind and deposited as loess over much of the central part of the continent.

A characteristic of loess is its ability to stand in vertical walls. This may be seen along some road cuts on Crowley's Ridge.

The cap of loess varies from zero to 50 feet or more in thickness. Portions of the Ridge approximate 200 feet in height above the flat land and is less than that over much of its length. It contains much luxuriant vegetation which includes the tulip tree (*Liriodendron tulipifera*) and beech. The tulip tree is native to the Ridge and is cultivated in other areas. An enormous beech called "Big Ben" in honor of Ben Crowley is featured on the Big Ben Nature Trail in Village Creek State Park. Apple orchards and farms abound on the Ridge.

CROWLEY'S RIDGE PARKS OFFER CHANGE OF PLACE DURING SUMMER OR WINTER

by Craig Ogilvie, Travel Writer
Department of Parks and Tourism

Arkansas' State Parks system is not closed during the winter months.

Many outdoor enthusiasts believe cool weather is a great time to park the camp gear and head for a state park. In eastern Arkansas that means Crowley's Ridge with nature parks from near Paragould to north of Forrest City offering some of the finest facilities in the system.

Crowley's Ridge is quite an attraction. The only highlands in this portion of the state, the ridge is tree-covered, made up of Gulf deposits and with wind-blown loess. Stretching from within the Missouri boot heel to Helena, the unusual hill range has been described as one of the great natural oddities of the world.

(Continued on Page 14)

Norfolk Pumpback Plan Opposed

Paddle Trails, Pulaski Chapter Newsletter, Jan. 1981

How many of you remember DeGray Reservoir on the Caddo River? One of the big attractions of this project, in its selling stage, was a reregulation dam downstream from DeGray Dam that would provide for pumpback electric generation. The structure was built, but at last report, it had never been used. Why? Because it would require more energy to pump the water back upstream than would be gained from running it through the generators. Yet, despite this failure, the Corps of Engineers is trying to promote a similar scheme below Norfolk Dam on White River. The project would destroy an important trout fishery and cost some \$60.2 million while supplying only a piddling 35,000 to 45,000 kilowatts of electric generation (as compared to the 1,694,000 kilowatts that can be generated by AP&L's Arkansas Nuclear One). Baxter County residents and resort owners recently turned out en masse to oppose the project. This is a classic example of a bad project masquerading as a viable "alternate energy project" and sportsmen-conservationists aren't buying it.

BACKPACK & REFLECTIONS (Continued from Page 7)

sunshine. It is worth the occasional discomfort and struggle to experience the desolation of wilderness, and reflecting on this has given me concern for the future of the Buffalo River.

The impetus for the founding of the Ozark Society was the preservation of the Buffalo River from dams and real estate developments, and when it became a national river we succeeded in that effort. Since that time the people of our nation have taken a renewed interest in outdoor activities and national parks have become a sort of tourist attraction like Disneyland, the Buffalo National River being no exception. During the spring and summer, buses, recreational vehicles, and cars carrying tourists from all corners of the country clog the air with exhaust fumes and the highways and towns with traffic jams. Roadside stands have sprung up to purvey food and "Survivor of the Buffalo" t-shirts. Outfitters keep long lines of paying customers moving, loading them into a canoe and shoving them off like the river was a roller coaster ride. Everywhere are large crowds of people laughing and splashing, creating a carnival atmosphere. The citizens of Newton, Searcy, and Marion counties have suddenly had to cope with the hustle and bustle of urban living. The hill people we were once proud to call friends, angered by condemnation of land and boorish crowds, now curse the Ozark Society and childishly seek revenge by stealing backpacker's stoves. We have saved the Buffalo from real estate developers and dams, but now we are losing its wild and scenic beauty to development as a national park.

So far the upper reaches have been spared, but the new access road causes me concern. Does the Park Service plan to develop a hiking trail? The easy access caused by the developed trail in the Caney Creek Wilderness in the Ouachitas has turned it into

an overused picnic ground, and I would not like to see this happen to the upper Buffalo. Ask yourself why no one in the Ozark Society floats the Buffalo anymore and you will begin to understand my concern.

Perhaps it is time for the Ozark Society to mobilize its forces once again to save the Buffalo. The Society should question the management of the river by the Park Service and give them our advice and support in managing the river in a way that will allow people to enjoy its wild and scenic beauty as a river rather than as an amusement park. Who knows, if things improve, maybe the Society will once again sponsor an outing on the Buffalo for old times sake.

The Future of the Meramec

As you float the streams of the upper Meramec basin, you notice how wild the country is, how clean the water is—especially considering that the teeming metropolis is just an hour or so drive downstream. The reason the Meramec has remained so undeveloped is simple. The U.S. Army Corps of Engineers has failed in its attempt to build a dam on the river near Sullivan.

Uncertainty about what would eventually happen has minimized development along more than 30 miles of the river that would have been permanently flooded. Through the proposed Meramec Park Dam was authorized by Congress in the 1930's, it was defeated by public opinion in the 1950's and in a regional, non-binding referendum in 1978. But only deauthorization by Congress can finally end the project completely.

Once Congress responds to public pressure and does deauthorize the dam, some 28,000 acres that the Corps has acquired for the impoundment will have to be put to some use by a public agency or sold back to private landowners. The Meramec Heritage Riverway Association, a not-for-profit organization, has developed a plan called the "heritage riverway" that would return about half the Corps land to private ownership. This would be mainly river-bottom land best suited for agriculture. Under the plan deeds to these tracts would be written so that parcels along the river could not be subsequently sold off for uses such as cabins or trailers not compatible with farming.

Of the remaining 13,000 acres reserved for public management, about 1,000 acres at six different points along the river would be managed as state parks, campgrounds and recreation or natural areas. The remainder, about 12,000 acres, would be managed by the state Department of Conservation for timber and wildlife as well as hiking, hunting and riding.

To our way of thinking, this heritage riverway plan offers all Missourians and visitors a unique kind of outdoor experience. Much of the land now owned by the federal government would go back on the taxrolls while the hilly ground, less suitable for productive uses, would be made available for recreation and wildlife conservation. All in all, it seems like the best plan to help everybody—farmers, all taxpayers and anyone wanting to take a leisurely float.

The next year or two will show whether the plan has a chance. Without public backing for the dam's deauthorization and the heritage riverway plan, the Corps property will likely be sold off at auction, and then the cabins and who-knows-what would soon threaten the river's beauty. The Meramec Heritage Riverway Association invites your support. It is an organization of river floaters, farmers, business people and others trying to put into effect this balanced, well thought out plan. You will hear about its activities on the news, but the best way to keep in touch and lend a hand is to write, to the Meramec Heritage Riverway Assoc., P.O. Box 9163, St. Louis, MO 63117. Contributions are welcome and needed.

If you are concerned about the well-being of our rivers in the state, a new organization is looking for active workers and people concerned about problems on specific streams. This is the *Missouri Stream and Watershed Alliance*, which can be reached c/o Sandy Primm, Rt. 4, Box 23, Rolla, MO 65401.

(Continued on Page 14)

BUFFALO NATIONAL RIVER

Currents

By Richard McCamant

Contrary to popular belief, the Buffalo River is alive, well and rising as the result of recent rains which blessed our area. Rains which promise to bring on the serviceberry, redbud and dogwood also seem certain to ensure another good spring canoeing season. It's only a matter of days until we should see the first brave souls venture forth and, by the first weekend in April, the roads will be lined with cars carrying precariously perched, inverted canoes on their way to the river. There will be standing room only in local cafes, and smiles on the faces of those who rent canoes.

There are few experiences in life which can compare to a spring float down the Buffalo. The combination of clean water, high

bluffs, wooded hillsides, and a myriad of wildflowers are enough to make a nature lover out of the staunchest city dweller.

A canoe trip down the Buffalo River is an experience well within the reach of anyone. If you don't have your own canoe, local outfitters will rent you one. They will even be so kind as to take you to the launch site, pick you up at the end of your trip, and return you to your car. You can arrange for trips varying in length from four hours to ten days.

It would seem appropriate here to offer a few suggestions to enhance the enjoyment of a float trip. Foremost is to avoid the crowds. Weekends in April and May are, by far, the busiest time of year for canoes and, the majority of floaters head for Steel Creek for the float to Pruitt, usually considered to be a two day trip. Camping facilities at Steel Creek, Lost Valley, and Kyle's Landing (the halfway point) are limited, and heavily used on Friday and Saturday nights. Downstream from Pruitt east, the number of floaters is much smaller and camping facilities are uncrowded. If possible, arrange your trip for mid-week, you may find yourself virtually alone in a near wilderness.

Whatever plans you make, come prepared, and check with a park ranger or your outfitter before starting your trip to obtain current river conditions. A map of the river showing access points and camping areas, and a list of canoe outfitters are available by writing to the Superintendent, Buffalo National River, P.O. Box 1173, Harrison, AR 72601.

MISSOURI DEPARTMENT OF CONSERVATION Prairie Day 1981

The Prairie, today — to a naturalist it is a vanishing natural and cultural treasure. The tall grasses that once covered nearly one-third of Missouri... once the home of Buffalo, Antelope, Elk and Prairie Wolves... now, a last retreat of the Prairie Chicken, Upland Sandpiper, Grasshopper Sparrows and a host of now uncommon wildflowers.

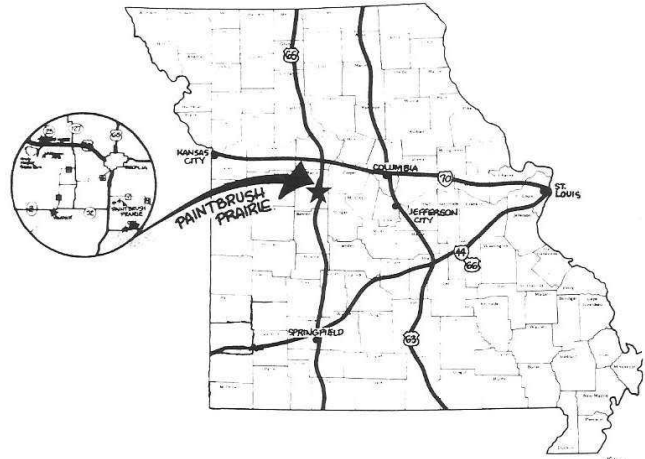
The Department of Conservation invites you to join us for a day on one of the few remaining unplowed prairies in the state. There will be "tailgate talks" about prairie mammals, birds and amphibians and reptiles. Department naturalists will lead small groups across the prairie interpreting the sights, sounds and moods of the prairie landscape.

Visitors at Prairie Day will meet and talk with 19th century traders. They'll learn about the lives and times of the men who challenged the prairie to trade for furs. Children will be treated to an old-fashioned storytelling session with stories about animals and nature.

Prairie Day will be held from 8:00 a.m. to 5:00 p.m. Saturday, May 16 at Paint Brush Prairie. Paint Brush is a 74-acre jewel just nine miles south of Sedalia along the east side of Highway 65. Visitors will also have an opportunity to visit Friendly Prairie just a mile west of Paint Brush.

Programs will be repeated throughout the day. It will take about two or three hours to experience all that is offered. Dress should be casual with tennis shoes or boots for walking and clothes suitable for sitting on the ground. A hat and sunglasses are recommended for your comfort. Binoculars will be handy for observing prairie wildlife. Photographers are welcome and should have ample opportunity for prairie wildflower photography.

If you wish to attend, please send the following information to: Prairie Day, Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102.

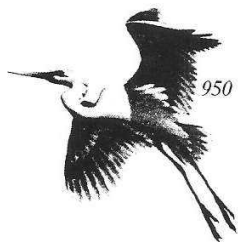


Name _____ Phone _____

Address _____ Number of Persons in Party _____



The ruins of a pretentious double chimney cabin on the west bank of the Buffalo River between the mouth of Dug Hollow and the mouth of Whitaker Creek. The name of the original inhabitants unknown.



National Audubon Society

950 THIRD AVENUE, NEW YORK, N.Y. 10022 (212) 832-3200 CABLE: NATAUDUBON
Expedition Institute For Release Before June 30, 1981

AUDUBON OFFERS ENVIRONMENTAL STUDIES SCHOLARSHIPS

The National Audubon Society Expedition Institute today announced that it is making scholarship funds available to graduate, college, and high school students who are interested in the subjects of outdoor education or environmental studies. Financial aid, in varying amounts, will be awarded by July 31, 1981, and may be used for any Audubon educational program or other school, college, or conservation education programs. Application forms may be obtained by the student writing to the National Audubon Society, Expedition Institute, 950 Third Ave., NY, NY 10022.

From **PADDLE TRAILS**

Newsletter, Pulaski Chapter
February 1981

STATE BUDGET SLASHERS EYE SCENIC RIVERS AGENCY

A state subcommittee known as the legislative Subcommittee on the Reorganization Act of 1971 voted Jan. 14 to recommend abolishing the "Arkansas Natural and Scenic Rivers Commission" of the Natural and Cultural Heritage Department.

While this is being passed off as a move toward economy in government, we are suspicious that most of the economizing being recommended by the current guardians of the public coffers is aimed at agencies that deal with outdoor recreation. In brief, it looks as though economizing is being used as an excuse to get rid of agencies certain legislators don't like.

Since the rivers commission has operated on a budget of \$41,000 this fiscal year, and is looking toward an increase to only \$44,000 for the next one, continuing its work is not going to cause the fiscal collapse of Arkansas government. Yet this agency is the only one actively working to preserve Arkansas' rapidly dwindling resource of prime scenic and recreational rivers and streams that mean so much to the high quality of life we enjoy in Arkansas. An Arkansas without scenic rivers is unthinkable. But that's the direction in which we are headed.

True, the commission has not been as effective as its members would have liked. But, they are keeping the issue open and before the public against overwhelming odds from the development interests in the state that view rivers only as sources of industrial water supply or carriers of sewage.

The attack on the Commission is being led by L. L. (Doc) Bryan of Russellville (one of the proponents of damming the North Fork of Illinois Bayou) and, of all people, our own Dave Roberts of North Little Rock. Perhaps our North Little Rock members should have a heart-to-heart talk with Rep. Roberts about the importance of river recreation to his constituents in the Greater Little Rock Metropolitan Area. If he doesn't realize it by now, perhaps he needs a reminder. Do it now. Please. Time is running out.

LET'S HELP ACC

Unquestionably, the Ozark Society and its campaign to protect the Buffalo River from dams popularized canoeing in Arkansas and started the sport on its way. For several years in the early 1960s, almost everybody spotted with a canoe atop their automobile was a Society member. . . period. But the Society's major thrust has always been toward protecting unspoiled rivers and wilderness through education, with canoeing being a part of that educational process of introducing people to the outdoors. It's obvious that if we don't preserve some whitewater rivers there isn't going to be any quality white-water canoeing. But the Society can't devote all its effort to canoeing and perfecting recreational paddling skills. For this reason, we encourage all our members to also join and participate in the activities of the Arkansas Canoe Club, which is designed to further the cause of recreational canoeing and kayaking, while being a strong voice for river conservation too. Together, we can pull twice as strongly toward what we believe in. Many Society members are also ACC members.

If you join between February 1 and April 30, your dues are only \$2.50 for family and \$1.50 for student (all memberships expire at the end of July). Stewart Noland or Mike Beard can supply you with additional information and an application blank. The application and dues should be mailed to Arkansas Canoe Club, Inc., P.O. Box 742, Fayetteville, AR 72701.

CROWLEY'S RIDGE (Continued from Page 10)

The northern most state facility on the ridge is Crowley's Ridge State Park, named for pioneer Benjamin F. Crowley, who settled the property about 1820. Located in the Walcott community on Arkansas Highway 141, the park contains 270 acres.

Construction of 18 new campsites, a bathhouse, 50 picnic sites and restroom, and resurfacing of the entire park road system, was

completed in January 1980. There are four cottages for year-round use and four large dormitory-type cabins for groups. Other park features include an eight-acre fishing lake, nature trails, pavilions, playground, amphitheater and swimming beach (open May-August).

Located approximately ten miles north of Jonesboro on State Highway 141 is Lake Frierson, an emerging state park along the western edge of Crowley's Ridge. Early developments include 30 picnic sites, restrooms, parking and boat launching ramp. The 350 acre lake is a joint U.S. Soil Conservation Service-Arkansas Game and Fish Commission sponsored project.

Lake Poinsett State Park is located three miles southeast of Harrisburg on State Highway 163. The sparkling 640-acre lake is the focal point of this facility, which is surrounded by lush forestland along the ridge. Park features include 25 Class A campsites, modern bathhouses, a large playground, picnic areas, launching ramp and utilities.

Village Creek State Park, between Wynne and Forrest City on State Highway 284, is destined to become east Arkansas' most comprehensive outdoor recreational complex when completed. The master plan calls for three lakes, 300 campsites, 300 picnic sites, lodge, cabins, and an extensive trail system to capitalize on the unique geography of Crowley's Ridge.

Present facilities include over 100 Class A campsites, five bathhouses, general store, laundry, hiking trails, two fishing lakes, playgrounds, 50 spacious picnic sites, pavilions, visitor center, tennis courts, and swimming beaches on both lakes for summer use. Village Creek comprises almost 7,000 acres along the ridge.

For addition information about Arkansas State Parks, write: Travel in Arkansas, One Capitol Mall, Little Rock, AR 72201; or call toll-free in-state 1-800-482-8999. Out-of-state call 1-800-643-8383.

THE FUTURE OF THE MERAMEC (Continued from Page 11)

Another new river group in the state is the **Missouri River Society**, which is a promoter of the recreational and scenic values of the river our state is named for. The society sponsors floats and other activities on the Big Muddy and can be reached at P.O. Box 1671, Jefferson City, MO 65102.

If you'd like more information on any Ozark rivers, seek out Oz Hawksley's Missouri Ozark Waterways (available from the Department of Conservation for a buck) or the state Department of Natural Resources has a fascinating new booklet, *Canoeing in Northern Missouri*, which has been free.

ENJOYING THE UPPER MERAMEC:

A guide for floaters, with basic canoe techniques described.

Copies of the guide are available for a dollar (including postage) from "Sandy" Primm, Rt. 4, Box 23, Rolla, Missouri 65401.

We have received a 11 by 17 inch foldout with the above title "printed on waterproof long lasting paper". There are approximately twelve 4¼ by 5½ inch pages in small type with titles *How to Canoe*, *The Art of Floating*, *Safety*, *History*, *Have we run out of Civility on our Rivers?*, *The River World*, *Responsibilities of Floater*, *The Future of the Meramec*, and *Upper Meramec Basin Map Key*. A map of the Upper Meramec covers approximately the remaining four pages. The foldout was copyrighted 1980 by an Editorial Committee: Jim Jackson, Marthasville; Sandy Primm, Rolla; Carol Springer, Bourbon.

The Guide is well worth a buck and is in an easily manageable form. Sandy is a member of The Ozark Society.

ARKANSAS RIVER (Continued from Page 4)

threat to water quality; and the same could be said for the likely increase in the number and amount of discharges reaching the river from municipal and industrial waste-water treatment facilities. However, with our increasing environmental awareness these potentially adverse impacts can be minimized. Technological advances will no doubt aid in the abatement of this problem and in the future potential risks

from these factors should be minimized. In addition, several communities along the Arkansas River have either just recently upgraded their wastewater treatment facilities or they are involved in one of several stages of work leading to the improvement of their facilities. The federal government has subsidized this program with 75% funding. The towns currently involved in this program include among others Fort Smith, Van Buren, Paris, Subiaco, Clarksville, London, Russellville, Dover, Pottsville, Atkins, Morrilton, Conway, Little Rock, North Little Rock, and Pine Bluff. A great deal of money, both local and federal, is being expended to carry out this construction grants program with improvement of water quality being the goal. Another federal program better known as the 208 program has suggested that certain best management practices (BMP) be adopted to minimize the effects of non-point source pollution resulting from certain agricultural and silvicultural activities in particular. As these BMP's are implemented the water quality in the Arkansas River should improve. As mentioned earlier chemical analyses have shown a general improvement in water quality in the Arkansas River since the mid 1940's. Because of these factors there is no apparent reason to believe that the quality of water in the Arkansas River will deteriorate in the future. In fact it may improve with time.

The time to begin to more seriously consider the Arkansas River as a drinking water source has passed. Several technical reports published recently concerning the development of water supply sources along the Arkansas River have given the Arkansas River only a cursory look. The people of Arkansas can no longer either economically or environmentally afford to support this stance. To evaluate the potential uses of the river and to help develop a policy on the river's use a study is directly needed to either confirm or disprove what preliminary examination of existing information on the Arkansas River shows. Whether or not a study is undertaken it is high time the state of Arkansas begin to continually develop the Arkansas River for what it may ultimately prove to be — a most valuable and limitless water resource.

Winter Woodland
—Lil Junas



10% Discount on Books

For Ozark Society Members, the Ozark Society Foundation now offers a 10% discount on all of its books. The 10% discount does not apply to the Hedges' Canoeing Guides, as they are published by the Society rather than the Foundation.

These books are available:

<i>Cadron Creek: A photographic Narrative</i> by Lil Junas (hard cover)	\$10.95
<i>Arkansas Natural Area Plan</i> (paperback)	8.95
<i>Illinois River</i> (paperback)	3.95
<i>Buffalo R. Country</i> (paperback)	9.95
<i>Buffalo R. Country</i> (clothbound)	15.95
<i>Buffalo River Canoeing Guide</i> by Hedges (paperback)	2.00 no disc.
<i>The Mighty Mulberry, A Canoeing Guide</i> by Hedges (paperback)	1.00 no disc.

Deduct the 10% discount from your total book order, and order from **Ozark Society Books**, Box 3503, Little Rock, AR 72203.

Dues Notice

Please send in your dues for 1981

Fill out the blank below and send it with your check to Steve Shepherd,
Membership Chairman, The Ozark Society, Box 2914, Little Rock, Arkansas 72203

Dues are for the calendar year. They are regular (and family), \$5; contributing, \$10; sustaining, \$25; life, \$100

Please check: new member; _____ renewal _____ Date _____

Last name _____ first names of husband and wife _____

Address _____ City _____ State _____ Zip _____

Telephone _____



Praise the Lord Sawmill — Frank Sharp