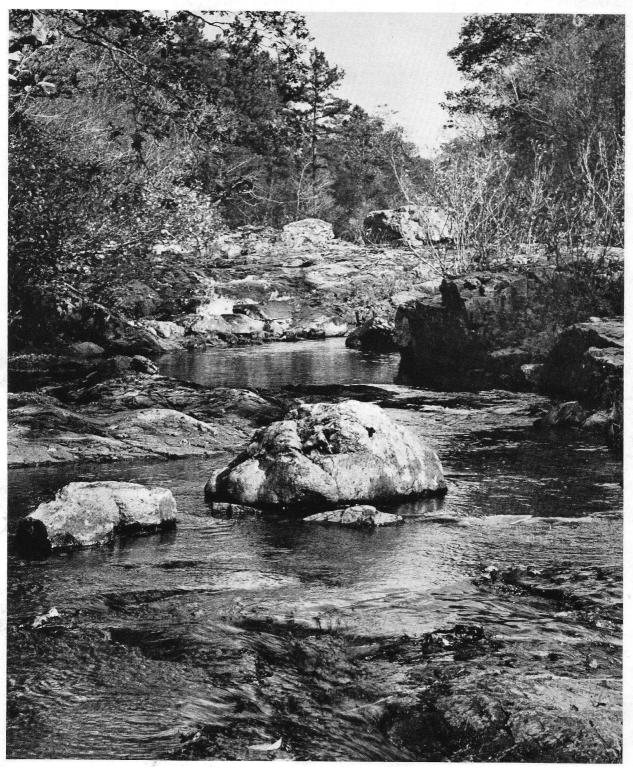
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This issue of the Bulletin is an attempt to assist Missouri conservationists in their efforts to preserve a few of Missouri's

In December 1974, the 93rd Congress of the United States, both the House of Representatives and the Senate, gave us a "terrific Christmas present" by passing the Eastern Wilderness and Omnibus Wilderness bills, later signed by the President, which added over 1.27 million acres to the National Wilderness Preservation System.

Arkansas gained Caney Creek and Upper Buffalo as "instant" wilderness areas and three study areas. Missouri conservationists received none of their proposed areas. Since last year they have worked getting together a number of wilderness proposals which are described in this issue of the Ozark Society Bulletin. Hearings in congress are expected to be held later this autumn; when they are, write your congressman for their support of legislation to preserve Missouri's wilderness areas.

THE ANNUAL MEETING was held earlier than usual this year, August 15-17 at the Ouachita Girl Scout Camp at Lake Sylvia. It was one of the most successful ever, with the two Louisiana Chapters, Bayou and Cajun in charge. A lot of fun was worked in between serious sessions. The Saturday night potluck supper featuring Creole and Ozark recipes was a gourmet's delight with the Creole dishes predominating.

Afterwards was a session of Cajun stories by Dick Walker "a Tennessee Cajun", and Guitar singing by Rick Michot of the Cajun Chapter. Joe and Maxine Clark, editors of the Bulletin

Afterwards was a session of Cajun stories by Dick Walker "a Tennessee Cajun", and Guitar singing by Rick Michot of the Cajun Chapter. Joe and Maxine Clark, editors of the Bulletin were given life membership and presented with WILD-FLOWERS OF THE UNITED STATES, Volume Two, (consisting of two large books) The Southeastern States, by Harold William Rickett, as this year's Neil Compton Award.

A large number of people were involved in the programs and workshops with emphasis on Louisiana wilderness areas and bayous. Joan Williams, chairman of the Cajun Chapter was nostess in charge of registration. The program was outstanding. Quoting from the Cajun Chapter Monthly News, "The Bayou Chapter (ed. Ross Bruner and helpers) had organized an interesting and informative program for Saturday. We saw an excellent slide presentation by Charles Fryling, landscape architect from L.S.U., on the Atchafalaya Basin. Clyde Lockhard, professional photographer from Baton Rouge, gave an inspiring presentation on Louisiana Scenic rivers and the wildlife they harbor. Sandra Thompson, Director of the Louisiana Trails Council, told of progress made so far in establishing trails in Louisiana. We heard from Bruce Macko, Deputy Forest Supervisor, and Bill Hess, Assistant Forest Supervisor about the Kisatchie National Forest. We had several good rap sessions following these presentations. It really makes for better understanding between government and people."

John Preston, Arkansas Museum of Natural History gave the children a Nature Program and Tip Davidson of the Bayou Chapter supervised morning and afternoon swims for them at the boat dock. Funny Canoe races late Saturday afternoon with Joan Williams and Cajun Chapter in charge, were hilarious. George and Irene Armstrong of Bayou instructed beginning canoeists.

A good and informative time was had by all. We hope we have the space in the next bulletin to tell more about the meeting and give some pictures of the water sports.

FRONT COVER:

Shut-In Creek in Bell Mountain Wilderness. Photo: David E. Bedan.

Wilderness in Missouri

America was born in the wilderness. Its imprint is deep in our nation's character. But the process of conquering an undefiled continent has left little of the country in an untouched condition, especially in the East. Most of the land east of the Rockies has been logged at one time or another. The vast virgin forests that greeted the original pioneers no longer exist. But this is not the whole story. In many of the more remote corners of the East, nature has been busy for decades restoring the forest cover and wild character of the land.

For several years the question before the American people has been whether or not some of these restored wildlands should be allowed to remain in a natural condition, protected as units of the National Wilderness Preservation System, Conservationists have voted a resounding yes to this question and pointed to a whole range of important benefits that Eastern Wilderness will provide. For one thing, wilderness is an important part of our historical heritage. Contact with the wilderness has helped to form our national character and we need to know that it will never be completely destroyed. The physical realization of our historical roots is especially important in times of uncertainty and changing values.

In addition, wilderness is an indispensable setting for primitive types of recreation where we can meet nature on its own terms. There should be at least some places where the noise and machines of the modern world are not allowed to drown out the sounds of running water, rustling winds, or singing birds. Many people cherish the physical and mental challenge of the wilderness for the opportunity to rediscover self-confidence and strength in a world more and more dominated by dulling technology. Many more people cherish the wilderness just as fervently for the very knowledge that wild and untrammeled places still exist.

Finally, wilderness is of extraordinary scientific value. In wilderness, scientists can study natural processes relatively undisturbed by man. Such studies will help us to make the right decisions of management on non-wilderness lands, and will provide further insight into native plant and animal communities.

In response to these and other arguments, Congress has enacted Public Law 93-622, designating Eastern Wilderness "__ in order to preserve such areas as an enduring resource of wilderness which shall be managed to promote and perpetuate the wilderness character of the land and its specific values of solitude, physical and mental challenge, scientific study, inspiration, and primitive recreation for the benefit of all of the American people of present and future generations." This Act immediately designates 17 Wilderness

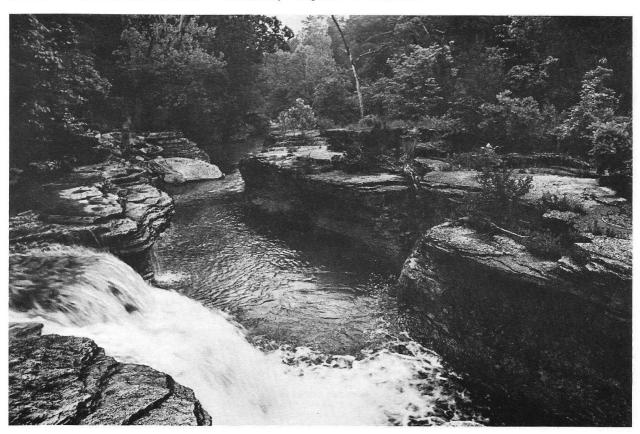
Areas and also designates 16 Wilderness Study Areas which shall be reviewed for their wilderness potential and acted upon by Congress at a later date.

In the drafting of this historic legislation wilderness areas in the National Forests of the Ozark Highland were included from the beginning. As the bill passed the Senate, nine Ozark areas were so included, four in Missouri and five in Arkansas. To the dismay of the Show-Me state, all four Missouri areas were deleted from the final version, due mostly to last-minute opposition from rural landowner organizations.

Missouri was left with no representation in the national wilderness preservation system. But Missourians want and need the benefits of wilderness as much as other Americans, and the Missouri Ozarks contain wildlands as beautiful and as biologically significant as any in the country. No system of Eastern Wilderness will be complete without representation of these ecosystems.

Consequently, Missouri conservationists have developed a number of wilderness proposals, revised to meet the objections of landowners, and are now working to

Falls on Long Creek, Hercules Wilderness. Photo: R. Roger Pryor.





include seven of these areas in wilderness legislation. The goal has been to develop not just a random scattering of wilderness, but rather a comprehensive system, a historical and biological textbook, reflecting the full range of natural diversity in the Missouri Ozarks. Every proposed wilder-ness illustrates a different aspect of the Ozarks and a closer look at these areas can provide an overview of the whole region.

The following descriptions are intended to give such an overview and also to show how each unit is an important part of the proposed wilderness system. Because of the extraordinary diversity of the Ozarks, no one or two areas could ever represent the region. The current proposals must all be designated to begin the process of establishing an adequate system of Ozark wilderness.

"Given a wilderness, we say, 'Develop it! Plow, cut, dig! Harvest it! Use it up!' But when we have made it into a city, a complex of factories and a maze of suburbs, we say, 'Conserve! Save these last few acres of wilderness as a reminder of freedom!"

Mingo Wilderness-

MINGO SWAMP

At the meeting point of the Ozark Highlands and the lowlands of the Mississippi River Embayment in southeast Missouri lies the most unique of all the proposed Missouri wilderness areas. The proposed Missouri Wilderness areas. The natural history of the Mingo Swamp Wilderness is unlike that of any other area in the state. Many native Missourians do not realize that true cypress swamps reminiscent of the deep South once spread across almost all of the Bootheel region. Visions of huge swamp forests that silently guarded meandering, bayou-like streams wandering slowly toward the lower Mississippi are hard to call up today. What we see now in the Bootheel is a stripped landscape of cotton rows and soybean fields, stretching mile upon mile to a flat horizon. The only sizeable remnant of the original swamp is in the Mingo National Wildlife Refuge in Wayne and Stoddard counties near Puxico.

Established in 1944 after a period of unsuccessful drainage projects and ill-advised attempts at agriculture, the 21,646 acre Refuge lies along an ancient, poorly drained channel of the Mississippi River. At one time the mighty river, now forty miles to the east of Mingo, flowed through this natural basin and sprawled across the swampy lowlands in high water. On one flank the river lapped at the very edge of the Ozark plateau and on the other was bordered by Crowley's Ridge. When the River changed course the former channel was left as a vast lowland swamp between the plateau and the ridge. The National Wildlife Refuge covers a portion of this lowland. It is possible to climb an Ozark bluff in the Refuge and look out over the swamp toward densely forested Crowley's Ridge which once lay across the Mississippi River.

Of the whole Refuge area, approximately 8,000 acres qualify for wilderness protection and have been so proposed. This acreage includes two adjacent units, one of 3,000 acres and one of 5,000 acres. The smaller unit in the southwest corner of the Refuge, includes a variety of bottomland forest types as well as Black Mingo Creek and Stanley Creek, meandering dark water swamp streams which wander deeply into the forested lowlands. The larger unit to the east contains Monopoly Lake which, in a sense, is the heartland of the Mingo Wilderness, for it is here that the essence of the legendary east" Missouri is most authentically preserved. Monopoly, Missouri's largest nat-ural lake, is a broad shallow basin, a remnant of the old Mississippi River channel. On the lake, natural expanses of open water mingle with ghostly stands of bald cypress, water tupelo, and other swamp vegetation.

Because the water regimen of southeast Missouri has been so altered by extensive drainage and channelization outside the Refuge, the Fish and Wildlife service has found it necessary to actively support the natural water levels in the wilderness. Fortunately, this is accomplished by facilities outside the proposed wilderness and thus there is no conflict with the provisions

of the Wilderness Act.

Archeological remains of old Indian camps and village sites indicate that Mingo has been a known wildlife area since long before historical times. Today, the Swamp retains its incredible diversity of plant and animal life. In fact, biologically the warm climate and abundant moisture help make Mingo Swamp the richest of all the proposed Missouri wilderness areas.

As in any true southern swamp, the tone of the landscape is set by the cypress and water tupelo, swollen and buttressed at their bases with tall, irregularly branched trunks. Fine stands of these trees have successfully regenerated from early logging and occur abundantly around and in Monopoly Lake. Some are also scattered along Black Mingo and Stanley Creeks.

In addition to these swamp sentinels, a whole range of bottomland oaks and other hardwoods make this one of the richest narawoods make this one of the richest forests in the whole Midwest. Huge specimens of Drummond red maple, willow oak, pin oak, water hickory, swamp cottonwood, and pumpkin ash lurk in the lowland forests. In fact, a number of Mingo specimens have been recorded as state and even national champions for their species. Usually flooded a portion of each year, these wet-bottomed forests support a dense vegetative growth that deeply shades the forest floor and creates a wilderness atmosphere wholly different from the open swamp lake.

These diverse vegetative environments are inhabited by an equally diverse population of wildlife species. Hardly a log can be turned in the wilderness or a twig investigated that does not reveal some fascinating form of life. Even humble, invertebrate creatures are vital links in the flow of energy through the food webs that connect all the living creatures of the swamp ecosystem.

Swamps are inevitably homes for many amphibians and reptiles, including snakes. Mingo is no exception. In fact, Mingo is probably the most important single stronghold for the unusual southern coastal plain species of reptiles and amphibians left in Missouri. Such species as the western chicken turtle, western mud snake, and canebreak rattlesnake occur in the swamp but are threatened elsewhere in the state by destruction of their habitat. One major factor in the abundance of reptiles in the swamp, besides the favorable climate, is the presence of Ozark bluffs, such as Fry Monopoly Lake, Mingo Wilderness. Crowley's Ridge in distance. Photo: David E. Bedan.

Bluff, adjacent to the lowland swamps where the reptiles, especially snakes, can seek refuge and hibernate in the winter months. Elsewhere in the Bootheel these crucial denning areas have either been destroyed outright or else pillaged by commercial animal collectors. There are those who cannot positively respond to the belligerent integrity of snapping turtle or water moccasin, to the scarlet beauty of a milk snake or the emerald glow of the rough green snake, or even to the exciting intensity of the spring choruses of spring peepers and tree frogs. But these creatures are an integral part of the wilderness community, without whom the swamp would lose much of its character. As biologist Archie Carr has observed, "Reptiles are a part of the old wilderness of earth...If we let the reptiles go it is a sign we are ready to let all wilderness go".

At least 207 species of birds have been recorded on the Refuge, including such threatened species as the bald eagle, peregrine falcon, and osprey. Of course, a major function of the Refuge is to provide a resting and feeding area for migrating waterfowl. Thousands of ducks and geese stop over in spring and fall, making migration periods especially exciting times to visit the Refuge.

The Fish and Wildlife Service has

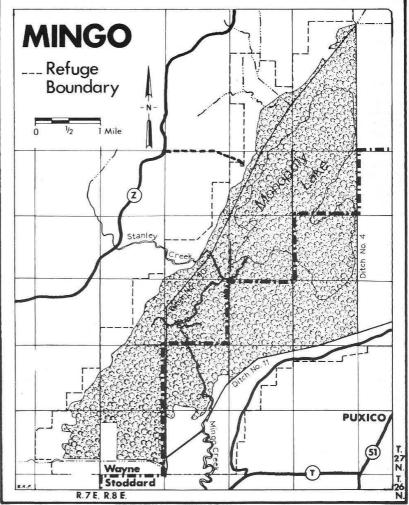
recorded 38 species of mammals for the Refuge and these include several Missouri rare and endangered species, such as the longtailed weasel, river otter, and swamp rabbit. The swamp rabbit in particular is dependent upon the Refuge as its last major stronghold in Missouri because of the ruthless destruction of its native habitat in the rest of the Bootheel. Big game species like white-tailed deer, bobcat, and reported black bear are also present and add to the value of the wilder ness as a genetic reservoir of native biology.

Another reason that the Mingo Wilderness is unique in Missouri is that as part of the National Wildlife Refuge System it is managed by the Fish and Wildlife Service within the Department of Interior. Other currently proposed Missouri wilderness areas are within the National Forest System of the Department of Agriculture. This distinction means that legislation to designate Mingo Wilderness will be introduced and considered separately from the

National Forest areas.

Mingo stands, most importantly, as the richest community of plant and animal life that we can still protect as wilderness in Missouri. It is literally the best we can do as a monument to the forces of biotic evolution that shaped life on this planet. By using the Wilderness Act, destruction of the last sizeable area of the trackless, primeval "swampeast" Missouri is a loss we need never suffer.





Bell Mountain Wilderness

Rell Mountain

At the geological heart of the Ozark region lies one of the oldest mountain ranges on the North American continent, the St. Francois Mountains. Occupying several counties in southeastern Missouri's highest elevations and her most ancient rocks.

Compared to some other regions of the country, the "Mountains of St. Francois" are not awesomely high, but these mellowed, lobate mountains have instead the beauty of great age, the magnetism of enduring stability in the face of temporal change. The igneous bedrock of these mountains was formed under molten conditions and remains the "crystalline core" of the entire Ozark dome. Made up of a variety of granites, rhyolites, and basalts, they represent exhumed Pre-Cambrian lava. Although many questions about the exact geomorphology of the St. Francois Mountains are still debated by geologists, it is apparent to even the casual observer that drainage patterns and general topography in this region are radically different from the rest of the Ozarks. Much of this special character results from the stubborn resistance of igneous rock to water erosion as compared with the younger sedimentary rocks that compose most of the Ozark plateau.

The St. Francois region, although very old and "rounded off," contains some of the most rugged land in the Midwest. Only a thin, poor type of soil can develop on the steep mountains and little of the igneous area has been cleared for agriculture. On the other hand, this portion of Missouri was one of the first to be explored and settled. Early in the 18th century, French settlers entered the Mid-Mississippi valley both from the north out of Canada and from the south out of "lower Louisiana". Small French settlements like Ste. Genevieve developed along the Mississippi and in the vicinity of the active new lead mines, such as Mine a Breton and Mine LaMotte, in the hills west of the River. Most of the actual mining took place on the northern fringe of the St. Francois Mountains or in the flint hills to the north, but interspersed throughout the mountains themselves were sizeable basins of arable land. In these basins, little villages such as St. Michaels (later renamed Frederick-town) grew up. As time went on, many Americans and Germans settled in the region. After such a long history of settlement, very little of the area has remained completely undistrubed by hu-

man activity.
Fortunately, there do still exist a few pockets of wild country, and Bell Mountain is an excellent example.

Bell Mountain Wilderness includes almost 9,000 acres of the Clark National Forest in Iron County, a few miles southwest of Belleview, Missouri. Bell Mountain is a long, loaf-shaped igneous knob that stretches for several miles on a generally north-south axis. It is a massive landscape feature and landmark of St. Francois region. The southern portion of

Bell Mountain extends on beyond the National Forest south into Reynolds County.

The eastern escarpment of Bell Mountain is the highest, most spectacular portion of the wilderness and a focal point of interest. This east-facing slope rises steeply 700 feet up out of the valley of Shut-in Creek to a boulder-strewn crest where open, igneous barrens create an aspect of "timberline" country. The top of this crest above Shut-in Creek is within a few feet of being the highest elevation in the Missouri Ozarks. With open views on all sides, it provides one of our most breathtaking natural vistas.

Bell Mountain lies practically at the western edge of the St. Francois region and thus the landscapes visible from the top of the mountain are not only beautiful, but also of great scientific interest. To the east, just across Shut-in Creek rises first of all glade-flanked Lindsey Mountain, watershed companion to Bell Mountain and an integral part of the proposed wilderness. Beyond Lindsey to the south and east rise the "tall peaks" of the St. Francois uplift: Goggins, High Top, Proffit, Church, Wildcat, and Taum Sauk Mountains. These peaks represent the climax of Ft. Francois topography and elevation. Until comparatively recently this region was the deepest stronghold of wilderness in the St. Francois range, and perhaps in the whole Ozark Highland. As early as 1949, these peaks were proposed as a wilderness area of around 100,000 acres. At that time not one paved or improved road penetrated the region. Bell Mountain was included in that early proposal. Most of the vista skyline visible today still reflects a wild and rugged

character, but visible in the distance, on Proffit Mountain, is the man-made

pumped-storage reservoir that in 1960 violated the heart of the wild country.

From Bell's crest it is possible to scan what still remains of the wilderness and

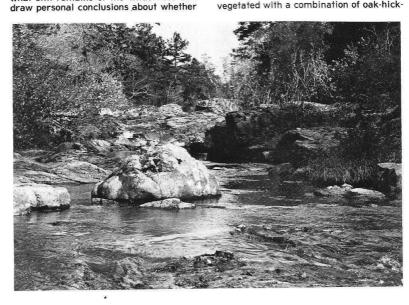
Bell Mountain

the remnant enclaves should be protected.

the remnant enclaves should be protected. Toward the western horizon, there is again a vast forested landscape with but little evidence of human disturbance; here, however, we are looking out over the intricately dissected remnants of the Ozark peneplain where the ridgetops that fall away to the horizon are all roughly level at their summits. Thus, this natural vantage point provides an excellent perspective for observing the geological contrast between two major realms of the Ozarks. Both types of terrain can be extremely steep and rough, but the ruggedness of the dissected plateau results from deeply carved hollows dug into the bedrock, while that of the igneous peaks follows from a resistant mountainous

Immediately below Bell Mountain on the west, massive ridges swoop down around the upper watershed of Joe's Creek. Joe's Creek comes to life in a whole series of rocky clefts that gouge the upper flanks of Bell Mountain. These rock-bound freshets tumble off the side of the mountain and ultimately consolidate themselves into a permanent clear stream that traverses both the igneous rock of the mountain and the dolomite of the broader valleys below. Fortunately, all of the upper water shed of this unique stream is included in the proposed wilderness.

The Bell Mountain wildernes is basically vegetated with a combination of oak-hick-



Shut-In Creek, Bell Mountain Wilderness. Photo: David

ory and oak-pine forests typical of much of the St. Francois region. Among the most interesting living communities in the wilderness, however, are the rocky, open "barrens" which cover the eastern crest of the mountain as well as extensive swaths across the upper slopes of both Bell and Lindsey Mountains. Sometimes called "glades" like the more prairie-like openings in limestone areas, these St. Francois Mountain barrens are conspicuous and intriguing amidst the prevailing forests.

Strewn with massive rose-hued boulders, the barrens lie exposed to the harshness of the sun and wind, too poor in soil or moisture to support true forest growth. An experienced student of Ozark flora, Fr. James Sullivan of St. Louis, has mused upon these arid, treeless barrens and written in the Journal of the Webster Groves Nature Study Society, "You might say this ancient rock is not used to life. The last time it saw the light of day the waters and the clouds were its only companions. Now freshly uncovered after ages of erosion, it seems to ask an unvoiced question: 'What are these strange intruders...?'".

The very harshness of the barrens

The very harshness of the barrens focuses our attention on the special life forms that have adapted themselves to

living there. Our study of these tenacious beings increases our appreciation for all living creatures.

In general, tree growth on the barrens is limited to a few scrubby specimens of post oak, blackjack oak, black hickory, or an occasional winged elm, all invariably gnarled and contorted in tribute to their harsh habitat. Scattered sumac shrubs of various species decorate the barrens with rock-garden spacing.

Weathering of the igneous rock renders the pittance of soil relatively acid. Only specialized plants can compete for space in such acid aridity. Among the plants that have adapted successfully are some of the most colorful flora of the richly-flowered Ozarks. Although small in deference to their sterile habitat, Rock Pink, Orange Grass, and tiny Sundrops scatter ruby, sunset, and gold on the summer barrens. In May, the very sky seems to touch the edges of the barrens in the carpets of lightblue Phacelia. Surprisingly enough, one of the plants that holds its ground around the edges of the boulders is a fern. A dense coating of surface hairs and an ability to curl up in dry weather dormancy help to explain the survival of the Hairy Lip Fern in the high barrens.

Animal life on the barrens must also

adapt or perish. Of course, large animals such as deer and wild turkey use the barrens as they please, retreating to the forest whenever comfort dictates, but some smaller creatures have adapted specifically to the barrens habitat. The lichen grasshopper, for instance, lives on the extensive rock exposures in the barrens where foliose lichens have begun the slow process of breaking down the stone into soil. These lichens splotch the boulders with green and grey mottling. Splotched with the very same mottling, is the little lichen grasshopper, impossible to discern when resting on the rocks in its home habitat.

Such adaptations to a harsh environment help give us insight into the processes of evolution. As. Fr. Sullivan continued in his article, "We thus experience the distance between the raw substance of a new planet and the very pinnacles of long evolutionary development. It does us good to feel out of place, to grow in appreciation for the niche that has been carved out for its."

This sort of insight reflects one of the most basic values of a wilderness resource. In the future, others will explore Bell Mountain and make their own personal discoveries.

Rockpile Mountain Wilderness

Rockpile Mountain

Southeast of Bell Mountain in Madison County, the smallest of the currently proposed Missouri areas centers around a lower, more heavily wooded igneous knob, Rockpile Mountain, that rises up just east of the St. Francis River, namesake stream for the old mountain region. Consisting of only around 4,000 acres, Rockpile cannot

claim huge dimensions or vast vistas. How can it claim wilderness status?

One way to find out is to follow the vaguely marked trail that leads from the Faro Tower site on Little Grass Mountain south into the wilderness. From the top of Little Grass Mountain we get a good perspective on the Rockpile Mountain

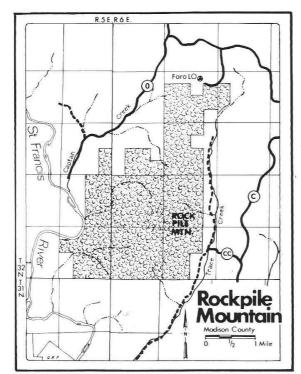
landscape. From the tower site, our southward view follows a well-defined, forested ridge that runs for several miles due south before becoming lost amid the flanking ridges that spread out from Rockpile Mountain itself, the elevated mass directly in our southern line of sight. It is this long rocky ridge that carries the trail leading to Rockpile. Before leaving Little Grass, we look to the east of the major ridge and note the valley of Trace Creek, to the west of the ridge and see the scattered farms outside the wilderness along Captain Creek, which flows southwestward toward the St. Francis River. The wilderness consists essentially of the major portion of Rockpile Mountain itself plus the trail-topped connecting ridge leading from Little Grass Mountain.

On the ridge trail, we note that this wilderness represents more densely forested aspect of the St. Francois Mountains than Bell Mountain. There are fewer openings in this ridge-top forest of oaks, hickories, and shortleaf pine. But the ground still shares the basic infertility of the more open areas so that the woods here

are not exceptionally tall.

If not towering, these woods are nevertheless deep, and forests cloak all sides of the approaching mountain. Near the top of Rockpile, in a scraggly growth of twisted oaks and adjacent to one of the scarce barrens, broods the source of the mountain's name, a circular pile of igneous boulders constructed before the advent of European men. Despite the fact that through the years curious but careless people have reduced the height of the rock enclosure, this structure can still be easily discerned and can still provoke questions

for which hard answers are not known. Most people wonder if the rocks mark a burial site or a sentinel post, or perhaps a ceremonial site where rituals were per-



formed. When was it constructed, and by what group of people? Has the environment around the rockpile changed since its construction? Is it likely that in the past the open barrens were more extensive and that more commanding vistas marked this peak as a logical center of activity? Other peaks in the region are higher, others can be found with broader, more commanding views. Why was this knob chosen over the others?

Much of the pilfering of the rocks seems to be associated lately with use of four-wheel drive vehicles that presently have access to the old logging trails in the area. Wilderness designation will close these old trails to mechanized vehicles and help to protect the rockpile from further deterioration. In the future, others should have the opportunity to pause on this igneous hill and wonder about the earlier people who used the place long ago for their own purposes.

Running west from Rockpile, a vague extension of the main trail follows a tributary ridge and turns north into the valley of a wild little creek that is born under the crest of Rockpile Mountain. This small, intermittent stream is unnamed and largely inconspicuous, but along portions of its course are miniature scenes as exquisitely beautiful as any in the Ozarks. The scale here is not large, but in detail, form, color, and texture the rocky, tumbling sections of this stream deeply satisfy our aesthetic sense. Halfway down the mountain, huge boulders begin to litter the waterway and force the flow into cascading detours over the stony barriers. As the

walls of the little valley close in, the gradient increases and the water glides and tumbles faster and more impatiently, passing pink igneous ledges wet from spray and decorated with cushions of moss, lichen, and fern. At last the rush and foam of white water spurts over a final precipice and plunges into a deep rockbound pool. Here the stream rests before slipping on in more ordinary fashion toward the St. Francis River.

This wild gorge is an example of a "shutins". Such formations are a unique characteristic of the St. Francois Mountains. Where a stream enters a narrow and constricted passage of unyielding igneous rock, the valley takes on the character of a gorge, with stark rock walls "shutting in" the water, which becomes a rapids. These craggy passes and turbulent waters offer of the wildest scenery in the Ozarks. The Rockpile shutins is merely an intermittent stream, with good flows only in the wet months. In the St. Francois region there exist much larger and better known shutins, but visit this one in the greening wetness of early spring and discover why there are none more beautiful, or more perfectly expressive of tireless water against resistant rock.

If we follow the stream below the shutins down to the vicinity of the river and then turn south for about ½ mile, we discover a large westward bend of the St. Francis walled in by a huge north-facing bluff carved from sandstone and dolomite. Massive and monumental, this bluff is yet tortuously fissured and pocked with caves, reflecting the gothic appeal of a medieval

ruin. Lush green vegetation ornaments the cracks and ledges and softens the bare rock. Among the shrubs that line the cherty slopes above the bluff itself are a number of rose azaleas. Rose azalea is considered by many to be Missouri's most beautiful native shrub. It blesses the acid-soil regions of southern Missouri in late April and May with gorgeous masses of fragrant pink blossoms. This prince of our flowering shrubs adds much to the beauty of the Rockpile flora.

One of the clefts in the large bluff forms a narrow, deep-soiled ravine which harbors a stand of forest that apparently escaped the timber cutters by its inaccessibility. In this tiny protected pocket, a hardwood community has developed that is reminiscent of lush Appalachian forests in its variety and vigor. Fine large specimens of basswood, butternut, Kentucky coffee tree, walnut, sugar maple, white oak, bitternut hickory, and red oak testify to the moist, protected conditions in this cove. Beneath an understory of American hornbeam, paw paw, and spicebush at least seven species of wild fern and such herbs as hepatica, wild ginger, and ginseng contribute to the lush atmosphere. This little vignette of undisturbed growth offers a glimpse of a comparatively rare aspect of the original virgin Ozark Forests

It is thus a combination of recreational, archeological, geological, and botanical features of the Ozarks that make Rockpile Mountain a worthy component in any adequate Ozark wilderness system.

Paddy Creek Wilderness

Paddy Creek

In the central portion of the Ozarks the landscape broadens out to a true plateau. Much of this area consists of rolling uplands known as the Salem Plateau. Over the centuries, however, flowing water has been at work eroding down into the elevated platform, and major streams such as the Gasconade and Big Piney Rivers have cut into the horizontal peneplain carving deep, blufflined valleys. Even in the most dissected areas the old plateau landscape is nevertheless revealed by the roughly level elevations of the major dividing ridges. Occasional protruding monadnocks indicate the remnants of younger plateaus that have been largely eaten completely away except toward the west of the Ozarks where the Springfield Plain remains largely intact.

In cutting through the plateau, the streams have exposed sedimentary bedrock formations laid down under ancient oceans long since receded. Three of the most extensive of these sedimentary formations are the Jefferson City, the Roubidoux, and the Gasconade, all of which date from Ordovician times. The Roubidoux consists mostly of grainy sandstone, while the others are largely made up of cherty dolomites. Most of the more level portions of the Salem Plateau have been long modified by man and today support an extensive cattle industry. On the other hand, in the vicinity of the cutting rivers, the carving of bedrock by active tributary streams has resulted in large areas of very rough terrain. Erosional drainage patterns have created in some

places a veritable maze of winding valleys and deep hollows divided by sharp, rocky ridges.

An excellent example of this aspect of the Ozarks has survived in the vicinity of Paddy Creek which flows into the Big Piney River out of the Clark National Forest in northern Texas county. The Paddy Creek wilderness consists of roughly 7.000 acres near Roby, Missouri.

ly 7,000 acres near Roby, Missouri.
Falling off the Big Piney-Roubidoux Creek divide where the Roby monadnock records a remnant of a younger sedimentary peneplain, Little Paddy Creek flows northeastward to meet Big Paddy Creek coming from the south. After joining, they become simply Paddy Creek, which leaves the wilderness in crossing Forest Service road 220 at the Paddy Creek campground and flows on to join the Big Piney not far upriver from Slabtown Spring. Along their wilderness courses, both Big and Little Paddy Creeks are fed by numerous steep tributary hollows.

The creek seems to have gotten its name from some of the earliest pioneers of Texas County. Texas County history records its very first settlers as "Boones and Paddies" who arrived in 1816. Although we would like to know more about these earlier settlers and their use of the land, we do know that toward the end of the last century the Big Piney valley offered up great quantities of fine oak and pine sawtimber. It was an admittedly exciting time as the huge virgin logs were hewn into railroad ties at a mill located at the juncture of Big Paddy and Little Paddy

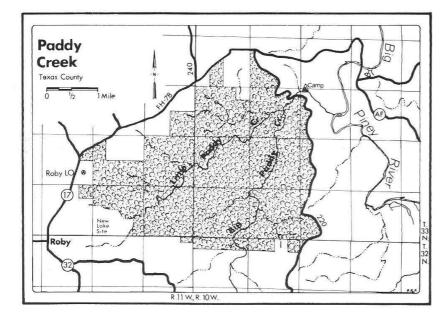
Creeks, then hauled by wagon to the Big Piney River, bound into large rafts, and floated down to Arlington and the auction block.

Today it is hard to believe that these wooded valleys were once the scene of so much human activity. The wilderness has returned in force to reclaim its own, and continues to patiently recount its own story upon the land.

Geologically, the wilderness accurately reflects the dissected Salem plateau, and the stream valleys are the best places to observe raw geology. Bluffs and boulder slopes frame the valleys of both creeks at every bend of their flow. On many of the bluffs, Roubidoux sandstone forms the thinner top ledges and Gasconade dolomite the thicker lower layers. The contact of these two formations is often discernable from the valley below, the bluish gray of the sandstone contrasting with the white and black streaking of the weathered dolomite.

In typical Ozark fashion, the Gasconade dolomite has succumbed to watery penetration in past ages and now contains a number of caves and springs. Forest Service studies of the area have identified over 20 small caves and unusual rock formations, as well as more than 50 identifiable springs. Some of these springs, although quite small, emerge from the ground in shaded, fern-bordered rock grottoes.

Perhaps the most unique geological aspect of this wilderness is the prevalent exposure of the Roubidoux sandstone. In



addition to forming the top ledges of many of the stream-side bluffs, chunks of this stone have tumbled down together on some steep slopes to create what have been described as "boulder falls". Some of the jumbled-rock areas contain really large blocks, big enough to form cautiously explorable passages and shelters. In one hollow, fallen sandstone has literally choked off the upper valley and created a miniature box canyon. A spring-fed pool issues from the base of these canyon boulders. Flowing water readily undercuts sandstone rock and in several tributary hollows wet-weather streams drop off the lips of 8-foot waterfalls into blue plunge pools below.

Biologically, the ravages of the last century have not prevented the return of a robust hardwood and pine forest. The sandy soils that develop over the Roubidoux formation produce excellent growing conditions for shortleaf pine, Missouri's only native pine species. Of all the proposed Missouri wilderness areas, Paddy Careek probably has the finest stands of this tree that was the very symbol of timber wealth in the old logging days. Particularly on the sandstone ledges of the upper bluffs, tall stands of pine always seem to frame our views of the valleys below. The abundant green pines add special beauty against the brown and leafless hardwoods of the winter land-scape.

Animal life is diverse and typical of the Ozarks. Abundant game animals make the area popular with deer and turkey hunters. Non-game animals are equally at home. For instance, the boulder falls that add so much interest to some of the valley slopes are also perfect homes for such animals as the eastern wood rat. The eastern wood rat is a clean, attractive little animal that builds its nest of heaped twigs and litter in the shelter of rock

Little Paddy Creek from bluff, Paddy Creek Wilderness.

crevices. Searching in these rocks almost reveals several of their telltale nests.

Some of the most interesting wildlife in Paddy Creek is associated with the two main streams themselves. Mink have been sighted along their banks searching for the frogs, minnows, and crayfish that make up much of their diet. In addition, several active beaver colonies have created blue pools along the creeks behind seemingly flimsy rock-and-stick dams. Once nearly

exterminated in the Ozarks due to overtrapping, the sociable beaver has made a good comeback. One of the noteworthy benefits of this wilderness is the opportunity to observe these animals at work in a natural, wild setting.

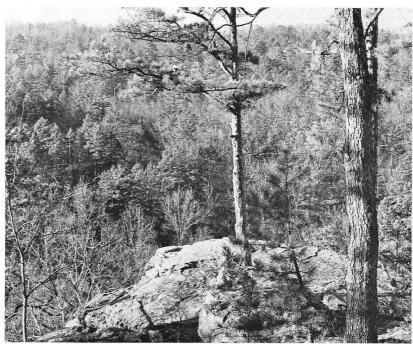
The beaver pools along the creeks also provide habitat for a variety of other animals. Green herons fish at the edge of the pools, and kingfisher can be sighted swooping raucously upstream. Native Ozark fish inhabit the beaver pools as well as the deep holes and riffles. Darters, shiners, bluegill, long-ear sunfish, goggle-eye, and smallmouth bass are among the species present. Many of these fish depend upon the abundant deep holes in both creeks for their habitat.

One of Missouri's most popular hiking trails, the 17 mile long Big Piney Trail, wanders through the wilderness and passes several of the major points of interest. The trail is excellent for backpacking. The streams themselves provide fishermen a rare Missuori opportunity to stream fish in a primitive back-country environment.

The Forest Service has recently ex-

The Forest Service has recently expanded the Paddy Creek campground just downstream from the wilderness, and begun the development of the new Roby Lake recreational area just to the southwest. The quality of experience at both Roby Lake and Paddy Creek campground will be improved by the wilderness in between, giving visitors a recreational alternative and an appropriate natural background to the developed facilities.

Big and Little Paddy Creeks form the soul of this wilderness. Their clear, high quality waters tie together the historical, geological, and biological themes that the Paddy Creek wilderness offers to the wilderness system.



Hercules Wilderness

Hercules Glades

Over in southwestern Missouri the dense forests of the Ozarks begin to mingle with large prairie-like glades. In this region, broad areas of thin soils over sloping limestone and dolomite hillsides have produced the growth of typical prairie plants in the midst of the Ozark hill country. The combination of open grassland and forested knobs and valleys create some of the most scenic and unusual terrain in the Midwest.

The beauty and biological importance of the Hercules Glades Wilderness in this unique region has won it numerous defenders. One of the conservationists who knows Hercules best and has worked hardest for its preservation is Buzz Darby of Springfield. Buzz has a thorough knowledge of the wilderness and has provided the following information:

The Hercules area, located in Taney County, Missouri, some twenty miles east of Forsyth and sixty miles southeast of Springfield, is comprised of some 13,000 acres of the Mark Twain National Forest.

The general topography of the Hercules area is a system of east-west ridges rising up to 600 feet above the valleys. Highest elevation is 1,382 feet at the site of the Hercules Lookout Tower on the eastern edge of the area. Lowest elevation is 700 feet on Long Creek at the western boundary. From the lookout tower, a long ridge runs generally west to Beaver Creek. In its length, it rises to form Upper Pilot Knob and Lower Pilot Knob. This ridge is the watershed divide between Brushy Creek and Long Creek which winds through the center of the area. South of Long Creek another ridge runs west forming Coy Bald separating the watersheds of Long Creek and Cane Creek.

and cane creek.

The area is characterized by heavy forest growth of oak and hickory interspersed by large open glades supporting a tall grass prairie community of plants. The glades occur on both hilltop balds and sloping hillsides.

Besides the forest and glade areas mentioned, other natural features are a series of waterfalls on Long Creek. These include a six-foot falls across a shelf and a unique ten-foot falls rushing through a dolomite cleft. Other waterfalls exist in the smaller watersheds and up many small tributaries. Many small springs and seeps are found in the area providing a good flow of high quality water. The spring sites also provide habitat for many mosses, ferns and flowering plants.

One of the unique values of the Hercules area is the diversity of vegetation and accompanying animal associations. Oakhickory forest predominates, interspersed with cedar, gum, walnut, dogwood, redbud, hawthorn, sassafras, persimmon, butternut, maple, sycamore and other shrub species. Conspicuous on the glades are Eastern red cedar (Juniper virginiana), Ashe juniper (J. ashei), and smoke-

tree (Continus obovatus).

Worthy of special note are the smoketree colonies which occur on limestone glades, bald knobs and wooded limestone bluffs. The bluish-gray smokelike appearance of the fruiting sprays, as seen from a distance, gives the tree its name. The trees range from Kentucky along the Ohio River, south to the Tennessee River Valley in Alabama, west to southern Missouri, Arkansas, and Oklahoma to the Edwards Plateau of western Texas. It has been suggested by paleobotanists that Cotinus is an ancient genus dating back to the lower Eocene, about 60 million years.

The glades also support true prairie grass communities of big bluestem, little bluestem, switch grass and others. Many prairie flowers occur of which the Missouri primrose, shooting star, and delphiniums are most spectacular.

Having both upland and lowland habitat, the area attracts virtually every animal indigenous to the Ozarks region. Besides such typical Ozark wildlife as foxes, skunks, and raccoons, Hercules is home to unique glade-dwelling creatures that have adapted to the open grasslands. Stingertailed scorpions hide beneath rocks, and colorful collared lizards bask in the Ozark sun just as they do in the desert Southwest.

Bird life includes not only the usual woodpeckers, owls, vireos, and warblers, but also the agile roadrunner, which darts from thicket to thicket across the glades. Copperheads are common in the woods, but pigmy rattlesnakes seem to prefer glade-borders.

Common fishes include large and smallmouth bass, rock bass, green sunfish and several species of catfish, suckers and minnows.

Rare or endangered species reported to be using Hercules are the long-tailed weasel, mountain lion, and bald eagle.

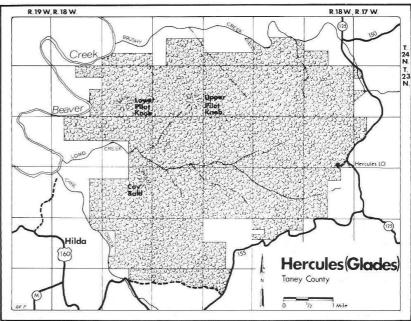
The proposed Hercules Wilderness provides a high level of isolation, challenge and opportunity for primitive recreation in an unique and interesting setting.

The combination of open grassy balds, forested knobs, and richly vegetated valleys make Hercules a superb hiking area. With the sense of open spaciousness provided by the glades, it is unique in the Midwest.

Hercules would be a worthy addition to the wilderness system. Representative of a highly specialized system of Ozark plant life, it has developed animal associations just as diverse. High in scientific, cultural and wildlife values, it has long been recognized for these but is increasingly important for its recreational potential.

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's works substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) is of sufficient size as to make practicable its preservation and use in an unimpaired conditions; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

—The Wilderness Act.



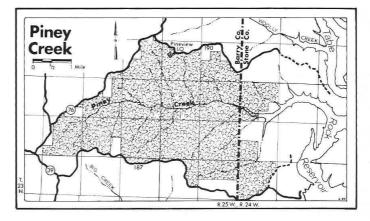
Piney Creek Wilderness

Piney Creek In 1818 and 1819, Henry Rowe Schoolcraft traveled on horseback through the Ozarks of Missouri and northern Arkansas. Of all the lands he saw and described, he had for none higher praise than the White River Basin, especially the valley of one of its major south-flowing tributaries, the James River, Schoolcraft and others since his time have noted the beauties of this region of clear, meandering rivers, tall, sun-drenched bluffs, and rich, extensive forests. This extraordinary landscape, however, has been almost totally altered in recent decades by the development of huge reservoirs. Such impound-ments as Bull Shoals, Taneycomo, Table Rock, and Norfork have permanently changed the White River country and attracted a pervasive tourist industry.

Surprisingly and fortunately, in the Cassville Ranger District of the Mark Twain National Forest there still remains one stream watershed that has retained its wild and primitive character. Located a few miles north of Shell Knob, the proposed Piney Creek Wilderness in Barry and Stone counties includes almost 9,000 acres and virtually the complete water-shed of one of the few undisturbed freeflowing Ozark streams left in southwestern Missouri.

Piney Creek flows for about five miles through the wilderness before finally emptying into the Table Rock impoundment of what was once the James River. The topography of the Piney Creek water-shed is a classic example of an extremely rugged dendritic drainage system. Like Paddy Creek, the main-stem creek is fed by numerous tributary hollows, each in turn fed by side-ravines and forked bran-ches. In contrast to Paddy Creek and other Missouri wilderness areas, Piney Creek drainage has little or no bluff forming meanders or rolling nearby uplands. The waters have cut into the entire surface of the watershed, penetrating in some places deeply enough to carve hollows that seem like giant forested troughs. The result is a terrain of tortured roughness. This ruggedness may be partly explained by the location of Piney Creek near where the Burlington Escarpment separates the Springfield Plateau from the Ozark pene-

View looking south from Pineview Fire Tower, Piney Creek Wilderness. Photo: Frank Tate.



plain. In this area of complicated geomorphology, the White River and its tributaries such as the James River have 'bred a huge progeny of deep ravines between narrow divides of various and varying summit altitudes. They cut up the scarp slope and the Ozark surface alike to make as rugged a country as anywhere in Missouri. (Bretz, Geomorphic History of the Ozarks in Missouri). Much of this landscape character can be appreciated from the top of Pineview Lookout Tower, adjacent to the wilderness. From the tower, tier upon tier of narrow ridges and swooping intervening hollows stretch out under the Ozark sky. The Mississippian and Ordovician-aged

limestone bedrock formations of Piney Creek are bedded with large amounts of flinty chert. Some have suggested that the chemically inert chert rock tends to break up on the ground surface and aid in the accumulation of forest soils. Cherty areas accumulation of forest soils. Cherry areas thus tend to have fewer and smaller open glades than the "cotton rock" limestone areas. Piney Creek is indeed more uniformly forested than the Hercules area to the east.
As with most Ozark areas, the basic

forest type in the Piney Creek watershed is oak-hickory and oak-pine, with numerous oak-nickory and dak-pine, with intimerous species of the first two groups in particular. The southwestern Ozarks is not far from the western edge of the great eastern deciduous forest and the Piney Creek forest reflects this marginal character in the overall prevalence of such drought the overall prevalence of such drought adapted species as post oak and blackjack

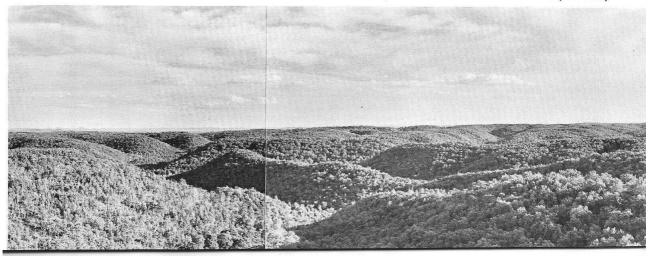
oak. Although the region is out of the main Missouri range of short-leaf pine, that tree does occur naturally in the wilderness, proving noteworthy enough to local people to have provided the creek its name. On some of the upper slopes in the thin, dry, cherty, soils, a shrub understory of wild huckleberry (Vaccinium vacillans) has taken hold. Some patches of these huckleberries are among the most deliciously truitful of any in the Orande. iously fruitful of any in the Ozarks.

In the deeper hollows a variety of more

moisture-adapted plants grow beneath a canopy of sycamore, walnut, and sugar maple. Some small glades do occur on south-facing slopes and these add the diversity of prairie flora to the watershed.

The Piney Creek Wilderness seems to be especially rich in large birds. The wild turkey attracts hunters who prefer the challenge of a primitive experience. Crowsized pileated woodpeckers scoop the air from tree to tree in the larger timber along the creek. Thermal drafts lifting from the steep hillsides make the area a favorite haunt for soaring turkey vultures. In the winter, a number of bald eagles that feed along Table Rock Lake use the wilderness as a protected roosting area.
Finally, deep in the wilderness, along a

heavily forested stretch of Piney Creek, a huge sycamore spreads its limbs in support of a cluster of nests of the great blue heron. Suitable rookery sites for such elegant, conspicuous birds are becoming scarcer as more of the state's waterways come under man's influence. The remoteness of the rookery on Piney



Creek has so far protected it from harm. Wilderness designation for the area will help to insure its protection for as long as these large birds decide to stay. Plans for wilderness use will have to provide for

their continued privacy.

From an ecological point of view the inclusion of an entire stream watershed greatly magnifies the value of any preserve. Within such a protected environment, scientists will be able to study the interrelationships of the living organisms in the watershed community with the assurance that human activities "up the creek" are not influencing the study area. For instance, many may well find it useful in the future to measure and compare the relative flow rates of this natural watershed and a similar sized watershed that has been modified by human activity such as agriculture or settlement.

Perhaps it is in terms of primitive type

Perhaps it is in terms of primitive type recreation that Piney Creek has its greatest appeal for most people. The attractiveness of the hiking terrain itself helps to explain this appeal. Hikers can choose to experience the full ruggedness of the hills by striking cross-country, or can instead follow one of the old logging trails that wander down the ridges. Many hikers penetrate the wilderness from the Pineview Lookout Tower on the northern periphery of the watershed. Hiking is especially rewarding in April during the spring blooming season for flowering dogwood and redbud. There are a number of small springs at various points along the creek or in side hollows that can refresh the weariest backpacker. Best of all, a series of abandoned fields down along Piney Creek itself furnish excellent camping sites. These camp sites are ideal not only for their general attractiveness but also because they can be used with a minimum of adverse impact on the wilderness communities.

With this combination of qualities, Piney Creek has been described as a perfect "family type" wilderness, a place to introduce even children to the natural world and the satisfactions of enjoying that natural world on its own terms.

mat natural world on its own terms. Another recreational pursuit in Piney Creek is hunting. As already noted, the wild turkey occurs here in numbers. Missouri turkey hunters as a group have proven themselves sensitive to the primitive aesthetic value of their sport and offen seek out remote areas inaccessible to vehicles. Piney Creek is perfectly suited for this type of hunting and will help to perpetuate a fine tradition of high standards among Ozark turkey hunters.

The huge reservoirs that have tamed so much of the southwestern Ozarks have in fact completely eliminated all free-flowing portions of the once-magnificent White River in Missouri. It can be granted that these impoundments provide substantial amounts of recreation for many people, but the type of recreation associated with these reservoirs is almost exclusively of the mechanized or heavily developed sort. There are simply few remaining wilderness opportunities in this portion of the Ozarks which Schoolcraft described in the last century as the most beautiful he had seen. The protection of the Piney Creek wilderness is crucial if we are to preserve even a tiny sliver of this popular and historic region for the appreciation of future generations of Missourians.

Irish Wilderness

Irish Wilderness

The quiet solitariness of the place seemed to inspire devotion. Nowhere could the human soul so profoundly worship as in the depths of that leafy forest, beneath the swaying branches of the lofty oaks and pines, where solitude and the heart of man united in praise and wonder of the Great Creator.

—Fr. John Hogan, 1892.

If any area can claim to be the cornerstone and symbol of wilderness preservation in Missouri, it is the Irish Wilderness. For at least a century the Irish Wilderness has been a region of folklore and legend, of twilight stories and somber myths. Stories are told, to be sure, of marauding Civil War guerrillas, of outlaw timber cutters, and of hidden stills up lost little hollows; but so also are tales of courageous settlers, of great natural forests, and of enduring wild beauty.

If people have heard of wilderness in Missouri at all, they have heard of the Irish Wilderness, and most Missourians seem to have absorbed enough of the popular tales that they have formed personalized visions of what this wild heartland of the Ozarks must be like. In some ways, these visions make it hard to write about the Irish Wilderness. After all, such a land of legend and fancy should not be too rigorously scrutinized lest we shrivel or disperse its romantic mystery, but the Irish Wilderness is a real place, with a real history, real natural features, and real boundaries, and those who know the Wilderness firsthand are confident that the spirits of the place will endure in the face of our respectful attentions.

To begin with, there is a rather large region of southeastern Missouri known in history and local tradition as the Irish Wilderness. This traditional Irish Wilderness lies roughly between the Current River on the East, U.S. Highway 60 on the north, and the Eleven Point River on the south and west, including portions of Carter, Ripley, Shannon, and Oregon counties. Today most of this region is occupied by the Fristoe Unit of the Mark Twain National Forest, still largely forested and very thinly settled. Local story-tellers continue to brag about how easy it still is to get "turned around and plumb confused" along the backwoods trails and gravel roads.

In addition, there has developed over the years a proposal to select the very wildest remaining parcel of the Irish region and specifically protect it as part of the National Wilderness Preservation System. This "Irish Wilderness" lies in Oregon County, comprising approximately 18,000 acres. No more appropriate location could have been chosen for the proposed wilderness. It lies immediately adjacent to the old site of the log cabin church built by Fr. John Hogan and his Irish settlers who gave the wilderness region its name.

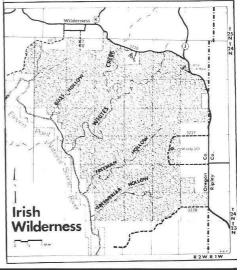
As a young missionary priest in frontier Missouri, Fr. Hogan had many and farranging responsibilities. In spite of the burdens he had already accepted on the north Missouri frontier, John Hogan was deeply affected by the suffering and poverty he saw among the Irish immi-

grants in the railroad camps around St. Louis, He resolved that he would help these people start a new life and acquire land of their own. For several years, the priest made periodic searches in south Missouri for inexpensive government land. Even at that time, the most desireable land had been spoken for and he finally had to turn to the piney woods land on the broad divide between the Current and Eleven Point Rivers. In 1858, Fr. Hogan led the first group of around forty Irish families down to the wilderness where they set about creating a new life on land of their own. The church they built to worship in stood just east of the presently proposed Irish Wilderness.

The hopes of this little band and their priest never came to fruition. The next few years brought the nation's greatest struggle even to the remote hollows of the Irish Wilderness. The wilderness was a natural hide-out for the desperate outlaws from both sides who marauded across southern Missouri and northern Arkansas. No details are recorded, but when the looting, raids, and murder finally ended, the Irish were no more. Killed or scattered, they left behind only their name, and a lingering presence in the lonliest of the wilderness hollows.

The history of the Irish Wilderness since the Civil War is characteristic for much of the Ozarks. For several decades after the War, the wilderness was largely abandoned, then around the turn of the century, the great timber companies swooped down upon the Ozarks. They left behind barren, cut-over land where the virgin forests of oak and shortleaf pine had stood. After this episode, only occasional hunters, freerange ranchers, or moonshiners had cause to enter such a wasteland, where the returning brush grew to nearly impenerable thickness. Finally, in the 1930's, the nation seemed ready to recognize a need for conservation. The Irish Wilderness was one of many Ozark tracts that became part of the National Forest System.

Recognizing unique qualities in the Irish Wilderness, the Forest Service had not constructed permanent roads into the proposed area. Nature has responded to protection by regenerating a natural forest cover for the wilderness.



The true history of the Irish Wilderness does not begin, however, with the story of European immigrants. The origin of the Wilderness might in fact be said to be in the beds of former shallow seas, for it lies within the dolomitic "flint hill" region of the Ozarks where the bedrock consists of

ancient deposits of carbonate sediments. Starting as little more than shallow washes in the rolling upland woods in the eastern and northern portions of the wilderness, such drainages as Bliss Hollow, Whites Creek, Freeman Hollow, and Greenbrier Hollow wander toward the Eleven Point River, cutting down and deepening their valleys along the way. In tracing these drainages to the river, we can begin to understand one of the unique characteristics of the Irish Wilderness.

Karst topography is the textbook word used to describe limestone regions of abundant caves, sinkholes, and springs.

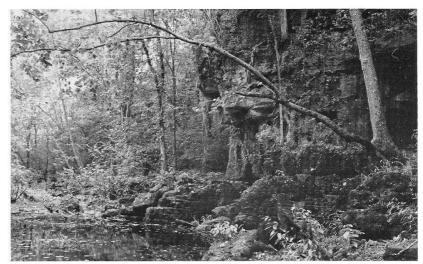
Up around the drainage heads, the

topography is very gently rolling and pocked with numerous sinkholes. These sinkholes, produced by subsurface drainage, vary in size and depth, although most are relatively shallow. Some are drained some are permanent waterholes, and still others hold temporary ponds during wet seasons. Some sinkholes have existed for many centuries and often harbor unusual plant species, besides providing water for a variety of forest wildlife in the relatively dry uplands. For example, in very early spring, hundreds of large and brightly colored Ambystomid salamanders migrate through the damp woods to these ponds, deposit and fertilize their gelat-inous egg masses in the shallow waters, then retreat back to the forest where the drying summer drives them deep into the rocky ground. Their gilled larval young usually are able to hatch, develop, and transform into lunged, air-breathing adults before the ponds dry up. Without these ponds, such wildlife could not survive in the dry upland woods of the plateau region.

As the drainages gather volume, they gradually begin to develop signs of permanent flow. Sycamore and Ozark witch-hazel begin to grow along their gravel banks, and trickles of water flow over the rocks from pool to pool. Just as the streams seem to be flowing well, we come streams seem to be flowing well, we come to long stretches of dry gravel wash. Such "losing streams" are characteristic of karst country and indicate where water has descended underground to help feed the subsurface water systems. Whites Creek, in the heart of the wilderness, is an

excellent example.
Further down the valleys we discover the surface outlets for these underground drainages. Small pirated such as Fiddlers Spring and Bliss Spring emerge from dolomitic rock ledges in mossy grottoes. Like the water holding sinkholes, springs provide habitat for a specialized flora and water for many species of wildlife.

On some hillsides, former spring outlets have been left high and dry by the downward cutting streams. Such entran-ces into the abandoned underground water-ways form caves, and the Irish Wilder-ness is shot through with them. Whites Creek Cave is the best known and is a good introduction to the underground Ozark world. Located high on the above-stream slope, the cave leads through large black



chambers past typical cave formations like stalactites, stalagmites, and columns. Life forms adapted to cave conditions are unique and fragile. Further exploration of other caves in the wilderness may well lead to the discovery of such communities.

As we have already been able to see, the biology of the Irish Wilderness closely reflects geological and geographic factors. Although the original stands of gigantic pine and oak are long gone, the basic forest cover, especially oaks, has returned in force, and with every passing year more closely resembles the virgin forest. It has been suggested that the Ozark Highland was the birthplace of the widespread oak-hickory forest type, and in the Irish Wilderness the variety of oaks can indeed be bewildering: white oak, chinquapin oak, red oak, scarlet oak, pin oak, shumard oak, Spanish oak, blackjack oak, and post oak have been recorded. Scattered along the cherty upland ridges, stands of shortleaf pine grow toward full maturity.

A whole range of Ozarkian herbacious species supplement the oak and pine overstory forest. A special feature of the wilderness is the abundance of dwarf crested Iris (Iris cristata) on shaded slopes in the larger hollows. In contrast, the primitive adder's tongue (Ophioglossum engelmanni) grows on drier, more exposed slopes

Because of the relatively poor soils so typical of the Ozark Highland, wildlife species are usually not found in great abundance; on the other hand, the long history of the Ozarks has allowed the development of a tremendous diversity of native fauna. Because of the large size of this wilderness habitat, the Irish has remained the home of practically the full range of pre-settlement Ozark wildlife. For example, both the American black bear and the eastern cougar have been reliably reported to depend upon the Irish Wilderness as one of their last strongholds in Missouri. In this respect, the size itself of the wilderness is a critical habitat characteristic.

The size of the Irish Wilderness is also a critical factor in another way. Hikers invariably report that they had no idea there was so large an expanse of wild forested country in Missouri. Foresters who think of wilderness primarily in terms

White's Creek, Irish Wilderness. Photo: David G. Cassell, Jr.

of alpine, mountainous terrain seem to have difficulty understanding the spirited determination of conservationists to protect the "monotonous" expanses of Irish forest. Some auto-bound tourists, weaned on post-card scenery, have driven to its edge and asked "If this is supposed to be wilderness, where are the mountains?

The best advice for them, or for any who desire an understanding of the wilderness, is to leave the car and step, preferably alone, into the woods. As one hikes along, ridge follows ridge and gradually the aspect of monotony is replaced by the authentic sense of vastness. We begin to realize that we are in the heart of a broad, wild landscape, a landscape that in an important sense has not yielded its ground. We know that we are walking in this land on its own terms.

Solitary hikers also report that powerful spirits inhabit the Irish Wilderness. It is claimed that these relate somehow to the moody waters of the Eleven Point River on the west, to the shadows of furtive animals only barely sensed, to the glimpse of tall pines swaying on a far ridge in a gray November bluster, or even to the lingering wraiths of Indian and Irish hunters.

Beyond any other Missouri place, the Irish can quicken us to a special wilderness music, remind us with special force of the existence and immensity of the nonhuman universe. It seems that we have yet much to learn of that universe, far to travel through it, and it may be that the

Irish Wilderness will help us find our way. As early as 1949, the Ozark's own conservation writer, Leonard Hall, proposed that the Irish be designated wilderness. Just a few years later, Dan Saults in the Missouri Conservationist wrote perceptively and sympathetically of the "space and breadth and clean loneliness" of the Irish Wilderness. These men, and several others, were ahead of their time in appreciating the inherent value of the all-but-forgotten Irish forest. We now have the opportunity to fulfill their vision and insure that the Irish Wilderness will always be a place where "solitude and the heart of man" unite "in praise and wonder of the Great Creator".

Conclusion

These seven areas represent an invaluable wilderness resource for the people of Missouri and the Midwest. Their successful designation will require the efforts of concerned people throughout the Ozarks and surrounding regions. Since passage of the 1974 Eastern Wilderness legislation, conservationists have been working to solve the problems that caused the deletion of the Missouri areas.

First of all, discussions with landowners revealed that their opposition stemmed not from the wilderness concept itself but from the inclusion of excessive private lands in the old boundaries. Many landowners have in fact expressed strong support for federal wilderness on public land. As a result of these discussions, conservationists have been able to confer and agree on new boundaries that exclude most private inholdings. For example, in the old legislation Hercules Wilderness included 16,400 acres, of which 3,600 was privately owned. In the revised boundaries, only 40 acres of private land are included in an area of 12,605 acres. In all cases it has been possible to slice most of the private lands from the boundaries without seriousy compromising the wilderness resource. Each area has retained its essential integrity intact. Landowners have responded positively to these efforts and there are hopeful signs of future cooperation.

Another problem has also surfaced that requires resolution. Some mineral interests have expressed opposition to the Irish Wilderness on the basis that there might be recoverable lead deposits located below it. Missouri conservationists have not been able to discover any adequate basis for this opposition. No actual field data have ever indicated lead to be present and according to several geologists of the Missouri Geological Survey, the likelihood is probably remote. Even if lead were present, the formations in which it occurs are so deep in the Irish area that it is doubtful whether it could ever be economically feasible to extract it. If the Irish Wilderness were designated, any hypothesized mineral resources would in fact be safeguarded and remain available in case

of national emergency.

In the absence of any substantive reasons to delay wilderness designation, conservationists have been forced to regard opposition to the Irish as spurious. One indication of the spurious nature of mineral-based opposition is the fact that no company has been willing to put up the money to actually explore the mineral potential of the Irish Wilderness.

An even more definitive indication has come from the Director of the Missouri Department of Natural Resources. The Department, which includes the Geological Survey, has weighed the available evidence and taken the official position that the Irish should be included in national wilderness legislation. Recently, the Missouri Conservation Commission has also endorsed this position and in fact recorded its support for all the other proposed wilderness areas. With this support from the state's two principal land resource agencies, Conservationists are

Glade country with smoke trees and red cedar, Hercules Wilderness. Photo: R. Roger Pryor.

Area	Acreage	Location
Mingo	8,000	Mingo National Wildlife Refuge Wayne and Stoddard Counties
Bell Mountain	8,533	Clark National Forest, Iron County
Rockpile Mountain	4,170	Clark National Forest, Madison County
Paddy Creek	6,888	Clark National Forest, Texas County
Hercules	12,605	Mark Twain National Forest, Taney County
Piney Creek	8,432	Mark Twain National Forest, Barry and Stone Co's.
Irish Wilderness	17,562	Mark Twain National Forest, Oregon County

confident that the broader public interest will prevail and the Irish Wilderness saved.

In addition to ironing out problems with the specific wilderness proposals, Missouri conservationists have been building public support for wilderness. A broadly-based coalition has been forming to help push these proposals to realization. The leadership in these efforts has come from the Ozark Chapter of the Sierra Club, the Conservation Federation of Missouri, and the Schoolcraft Chapter of the Ozark Society.

By working together, citizens all across the Midwest can help to preserve a vital heritage of pioneer history and natural beauty. We urge all who want to help out in achieving these goals to write to Missouri's congressional delegation. They need to hear from as many people as possible that Missouri wants and needs wilderness, and that the time for action is now.

Senator Stuart Symington/Tom Eagleton Senate Office Building Washington, D.C. 20510

The Honorable (Congressman's name) House Office Building Washington, D.C. 20515 Besides writing to these congressmen, you may want to help in an even more active way. Such help is badly needed. For information on what you can do, contact any of the following:

Conservation Federation of Missouri 312 East Capitol Jefferson City, Missouri 65101

Wilderness Committee Ozark Chapter, Sierra Club 112 Stephens Hall University of Missouri Columbia, Missouri 65201

Schoolcraft Chapter Ozark Society P.O. Box 692 J.S. Springfield, Missouri 65801

Text by John A. Karel Design and Graphics by Roger Pryor

Appreciation is hereby expressed to Ken Smith, Joe and Maxine Clark, Buzz Darby, and Dave Bedan for assistance on this article.



Ozark Society Activity Schedule

CARL GUHMAN, OUTING CHAIRMAN 1315 S. SCOTT ST., LITTLE ROCK, ARKANSAS 72202 PHONES 374-8127 & 371-1941

OCT. 3-5, ALL CHAPTERS: Environmental Education Workshop at Shores Lake Camp in Ozark N.F. By reservation from Bill Fulton, Envir. Ed. Specialist, Ark. Dept. of Education, Capitol Mall, Little Rock, 72201.

OCT. 4, CAJUN: Orienteering Part II. Rick Michot, 318-233-5709.

OCT. 4-5, INDIAN NATIONS: Feyodi Creek Camp and Arkansas R. Float. Bob Ferris, 2811 E. 22nd, Tulsa, 74114; 918-747-4836.

OCT. 11-13, PULASKI: Lower Buffalo R. Float, Bob Ritchie, 1509 Old Forge Road, LR, 72209; 501-225-1795.

OCT. 12-18, ALL CHAPTERS: Middle Buffalo Canoe Trip guided by Harold and Margaret Hedges. Reservations only, from the Hedges at Ponca, AR 72670.

OCT. 12, PULASKI: Ouachita Trail Day Hike. George McAlister #8 Bliss Circle, Little Rock; 501-565-6119.

OCT. 18, HIGHLANDS: Wedington District Dayhike, Fay. Meade, 934 N. Gregg, Fayetteville, AR 72701; 501-442-6456.

OCT. 18, CAJUN: Second Annual Canoe and Pirogue Races. Joan Williams, 306 Laurence, Lafayette; 318-234-3250.

OCT, 18-19, BAYOU: Caney Creek Backpack, Bill Stevenson, 318-686-2658.

OCT. 18-19, DELTA: Ponca to Pruitt on Buffalo R. Jim Dardenne, #3 Malcomb, Pine Bluff, AR 71601; 501-536-3476.

OCT. 18-19, INDIAN NATIONS: Belle Starr Caves Backpack. Bob Ferris (Address

OCT. 19, PULASKI: Ouachita Trail Dayhike, George McAlister (Add. above.)

OCT. 25, BAYOU: Delaney Mtn. Dayhike. Russ Bruner, 318-868-1379

OCT. 25-26, CAJUN: Wolf R. (Mississippi) Canoe Trip. Pat and Jerry Freeman, 318-984-2762.

OCT. 25-26, INDIAN NATIONS: Ponca to Pruitt on Buffalo R. Bob Ferris (Address

OCT. 25-26, PULASKI: Ouachita Trail Backpack, Bob Ritchie (Address above.)

NOV. 1, CAJUN: McGee's Creek (Miss.) Float. 5 Canoe limit. Dick Williams (Address above)

NOV. 1-2, PULASKI: Sylamore area dayhikes. George Toney, 501-225-8124.

NOV. 8-9, CAJUN: Orienteering Competition and Red Dirt GMA, Rick Michot, 318-233-5709.

NOV. 8-9, SCHOOLCRAFT: Piney Creek Wilderness Backpack. Bill Bates (address above).

NOV. 9, DELTA: Richland Creek Hike, Chalmers Davis, Altheimer, AR; 501-766-8301.

NOV. 8-9, INDIAN NATIONS: Sequoyah State Park Camp and Hike. Bob Ferris (address above).

NOV. 15, HIGHLANDS: Hike frontier road in White Rock Mtn. area. Dick Murray, 2006 Austin Dr., Fayetteville, 72701; 501-442-8995.

NOV. 16, PULASKI: Big Piney Canoe Trip. Bob McKinney, 4214 Fairview Road, Little Rock, 72205; 501-664-3655.

NOV. 22-23, INDIAN NATIONS: Caney Creek Backpack, George Pierson, 5715 E. 22nd Pl., Tulsa, 74114; 918-834-2241.

NOV. 22-23, PULASKI: Dry Creek WSA Backpack. Carl Guhman, 1315. S. Scott, Little Rock, 72202; 501-374-8127.

NOV. 27-28, ALL CHAPTERS: Annual Thanksgiving Float on Buffalo R. Scott and Carolyn Crook, 892 Longview, Fayetteville, AR 72701; 501-443-5162.

DEC. 6, DELTA: Hike Hurricane Creek to Natural Bridge. Jim Dardenne (address

DEC. 6-7, INDIAN NATIONS: Robber's Cave State Park Camp and Hike. Glen Ramsay, 1725 S. Yorktown, Tulsa, 74114; 918-936-1546.

DEC. 6-7, PULASKI: Day Hikes in Mulberry R. area. Alice Andrews (address above)

DEC. 13, HIGHLANDS: Glory Hole Day Hike. Glenn and Helen Parker, Dutton, AR 72726; 501-677-2473.

DEC. 13-14, SCHOOLCRAFT: Weekend Backpack in Hercules Wilderness. Jackie

DEC. 16, CAJUN: Christmas Caroling by Canoe in Lafayette. Sarah Schoeffler, 1100 Marilyn, Lafayette, 70501; 318-984-5456.

DEC. 26-28, PULASKI: Upper Buffalo Backpack. Jack Downs, 501-663-0749.

DEC. 31-JAN 2, ALL CHAPTERS: Annual New Years Float on Buffalo. Gravel Bar Party New Years Eve (Non-alcoholic); Float Jan. 1 and 2, depending on weather. Harold and Margaret Hedges, Ponca, AR 72670.

OZARK SOCIETY T SHIRTS are now available from The Ozark Society, P.O. Box 2914, Little Rock, Arkansas 72203 at \$4. each. They come in sizes S M L, and Ex. L. One is gold with one of George Fisher's "Keep Busy" cartoons of a U.S. Engineer. The other is white with the insignia of the Ozark Society in green.

Zip_

PHILLIPS LITHO CO., INC., SPRINGDALE, ARKANSAS

Address

Dues Notice

New memberships are good for the remainder of this year and 1976.

Please fill out the blank below and send it, along with your check to Kriste Rees
Box 2914, Little Rock, Ark. 72203.

Dues are for the calendar year. Th Student membership, \$2.00.	ney 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	

State_

Telephone ______ If Student—name of school.

City



THE ANNUAL BUFFALO RIVER CLEANUP FLOAT was held September 6-7 along the stretch from Gilbert to Buffalo Point, about twenty-two miles. Because of lack of space, pictures will be deferred until later, but the winners and donors of prizes are:

George McAlister and Mike Moriarty, Little Rock - Blue Hole Canoe donated by: Ozark Outdoor Supply, Red River Marine, Wayfarer Expeditions, Inc., The Blue Hole Canoe Co., The Bow & Stern, Mooer's Alpine

Second: Steve Wilcox - Jon McCain, U of A, Fayetteville - Camp Trails backpack and Sawyer paddle by Hedges Canoes. Third: Dwayne Bell - Steve Cheney, U of A - Old Town paddle from the Pack Rat, Scott and Caroline Crook, Fayetteville,

Playmate Cooler from Bayou Chapter.
Fourth: Bob Fisher, L.R. - Ralph Rosberg, Arkadelphia - \$20 gift certificate from Orvis Shop, Little Rock and camp cot, Fuller Drug, Arkadelphia.
Fifth: Gregg Wiedman - Dale Doty, U of A - Coleman Stove,

Beaver lodge on Mingo Creek in Mingo Wilderness. Photo: David E. Bedan

Walmart, and Waterproof duffle bag, Himalaya, Inc., Pine

Sixth: Joe White - Larry Coleman, instructors U A L R, Gruman life vest and Gruman paddle, Pack and Paddle, Lafayette, Louisiana.

Seventh: Carol Spears - Kim Bowman, U of A, Coleman lantern,

Walmart, Ozark Society T Shirt, Ozark Society.
Eighth: Jim Bell, Hot Springs - Andy Rogers, Monroe, La. Coleman Pump-no-more, Dillards, Little Rock, and Ozark

Society T Shirt, Ozark Society. inth: Alan Burton - Rick Ashcraft, O.B.U., Arkadelphia - Life Vests from Scott and Caroline Crook, Pack Rat, Fayetteville. Tenth: Carl Guhman - Bob Ritchie, Little Rock - Divers' mask from Mary Virginia and Hubert Ferguson, Conway.

A one dollar bill was given by the Ozark Society to each child that floated the river.