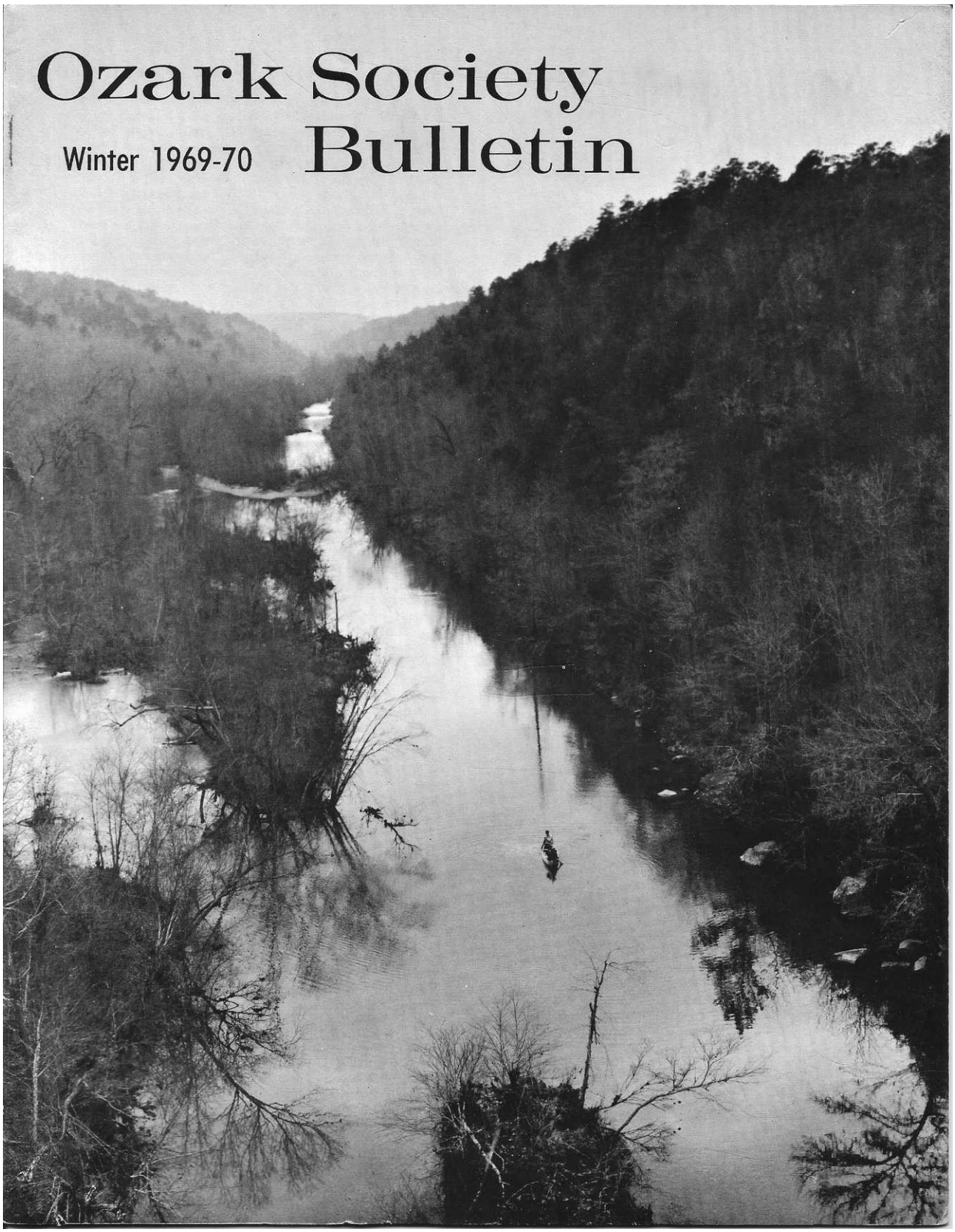
Ozark Society Bulletin

Winter 1969-70



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Drawings by Kathrine Winckler, David Plank

Front Cover: Cossatot upstream from Highway 4 Bridge. **R. G. Hutchinson**, Bayou Chapter, printed the photographs of the Cossatot which were taken by **Virginia Jack** (Mrs. Wellborn Jack, Jr.)

The Ouachita Streams A Clinical Report

In this issue of the Ozark Society Bulletin you will read a report by Wellborn Jack, Jr. (as good a landscape pathologist as we have encountered since Ozark Society came into being) concerning the unrelenting metastasizing disease that threatens in the mid 1900s to destroy America's scenic beauty spots to the very last. If we were to name this all consuming affliction we would have to call it U. S. Army Corps-omatosis. Here in our uplands it has spread like a malignancy up and down the drainage systems of the Ozarks until hardly a single river remains intact, and this is especially true in the Ouachitas. Here it is an obstructive phenomenon presenting drowned valleys clogged with mud flats and dead timber on every hand.

In the lowlands and along the coast unnecessary and universal drainage of every watercourse has taken place resulting in a hemorrhagic affliction of the landscape. Thousand upon thousands of acres have been bled dry resulting in the destruction of whole ecosystems dependent upon marshland habitat.

It is unfortunate that Ozark Society appeared upon the scene too late to do more than diagnose the intractable disease that now besets every free flowing stream in the Ouachita Mountains. We are now reduced to the expedient of performing resuscitation where any possibility of saving the patient is likely. In this case such a possibility does exist on the Cossatot. It can only add to our credit for this Society to work diligently to obtain a thorough restudy of the Gillham project.

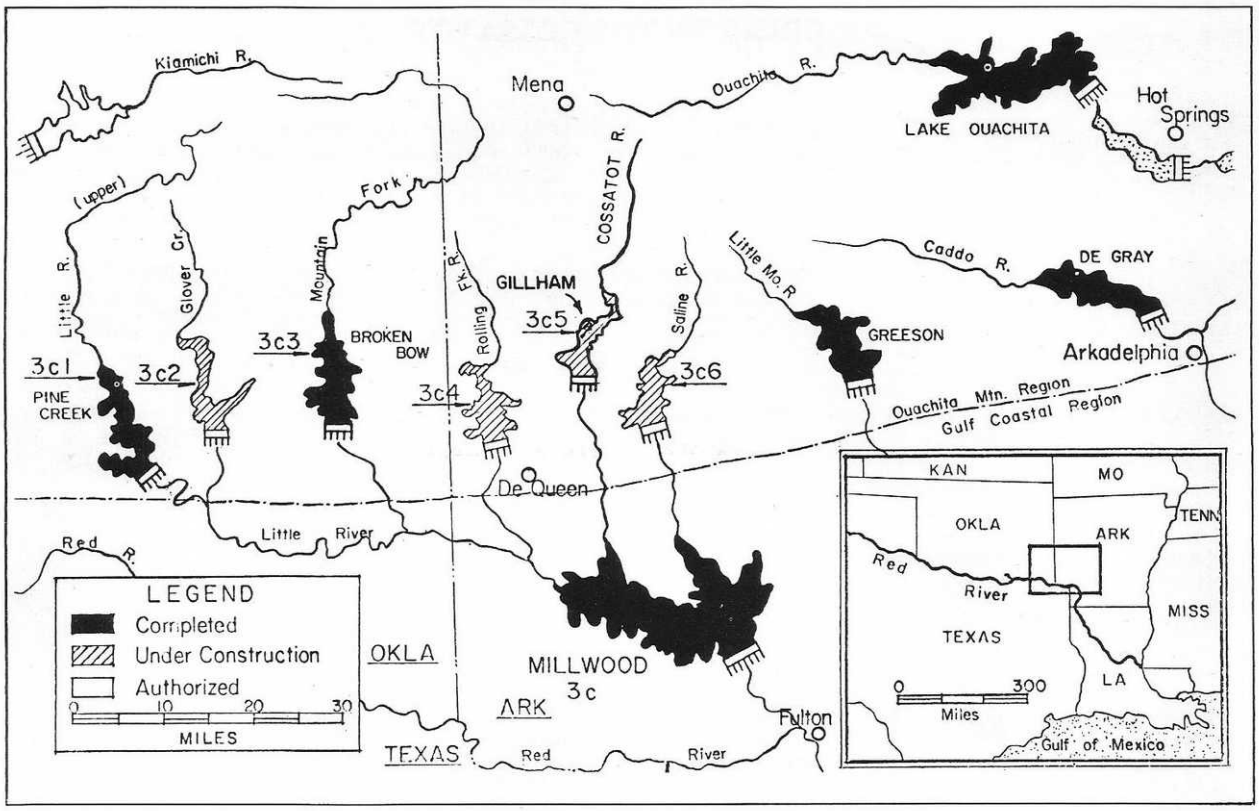
We must not overlook the fact that such action is not out of style or out of order these days. President Nixon's recent recognition of the conservation problems confronting America attests the validity of this statement. The final and official stopping of work on the Miami, Florida Jetport, which if completed would have ruined the Everglades of southern Florida, followed very soon after this decision. Many other similar projects great and small will be challenged in the next few months or years. One of the best examples is regarding the situation of the Oklawaha River in Florida; a reprint of "Rape on the Oklawaha" from the January 1970 Readers Digest is included in this issue. We are encouraged by the widespread citizen alarm concerning the destruction of our natural environment and heartily endorse all efforts in behalf of the Cossatot River.

Neil Compton, M. D.

The Buffalo River, Present Status

In spite of apparent quiesence, efforts to obtain the enactment of legislation to create the Buffalo National River in north central Arkansas are going on. Indications are that consideration of Congressman John Paul Hammerschmidt's bill, H. R. 10246, will be forthcoming in this Session of Congress. Reports are that the chairman of the House Committee on Interior and Insular Affairs, Congressman Wayne N. Aspinall is not antagonistic toward this legislation. It is a fact that a large backlog of legislation is now before the House concerning similar matters and that some of this legislation will need to clear before the bill in question is brought up.

As of now we can say that it appears to be a certainty that it will be necessary for us to appear for a second time at a hearing in Washington. This time we will plead for the passage of H. R. 10246 before the House Committee on Interior and Insular Affairs, Subcommittee on National Parks and Recreation, Congressman Roy A. Taylor, North Carolina, Chairman. Congressman Wayne N. Aspinall will call the hearing and thus is the one to whom our present requests should be directed. Copies of such communications should be directed to Congressman John Paul Hammerschmidt of Arkansas.



REDRAFTED BY FRANK B. AKIN FROM CORPS OF ENGINEERS' MAP

Status of U. S. Army Corps of Engineers projects in the Ouachita Mountains.

BY WELLBORN JACK, JR.

The U. S. Army Corps of Engineers has built or is in the process of building dams on **all** of the major recreational rivers of the Ouachita Mountains of Southwest Arkansas and Southeast Oklahoma.

Outlines of reservoirs and courses of streams shown on the above map have been taken directly from the March 1969 Corps map entitled "Red River Basin, Flood Control and Navigation Projects", accompanying the April 1969 Corps report on "Status of Projects, Red River Valley". Status of projects has been updated to include subsequent events of the year 1969 which saw the closing of DeGray Dam on the Caddo, Pine Creek Dam on the upper Little River, and Broken Bow Dam on the Mountain Fork.

The source Corps map grossly exaggerates the size of reservoirs still under construction. In actuality, the completed Millwood Reservoir has approximately 20 times the surface area that Gillham Reservoir will have when completed. The flood pool surface area of Millwood does appear to be accurately represented on the map, therefore, actual relative sizes of the upstream reservoirs in Arkansas can be visualized by the following comparisons of surface acreages:

Reservoir	Flood Pool	Normal Pool
Millwood (3c)	95,200	29,200
DeQueen (3c4)	4,050	1,680
Gillham (3c5)	4,200	1,370
Dierks (3c6)	2,970	1,360

These surface area figures for the flood control impoundments of the Little River Basin are also to be compared with the less fluctuating surface acreages of completed power producing reservoirs of the Ouachita River Basin:

Reservoir	Flood Pool	Normal Pool
Lake Ouachita	48,300	40,100
DeGray	11,800	8,800
Lake Greeson	9,800	7,200

Relative distances between reservoirs are accurately depicted by the Corps map. For example, DeQueen and Dierks Reservoirs both lie within 10 miles of Gillham Reservoir.

Continued construction of projects not yet completed is dependent upon continued annual Congressional appropriations. Despite the President's order on cut-back in spending, the Fiscal Year 1970 Public Works Appropriation Bill was signed into law December 11, 1969 providing the following funds for continued construction:

Lukfata, Glover Creek (3c2)	$525,000.00
DeQueen, Rolling Fork (3c4)	$300,000.00
Gillham, Cossatot River (3c5)	$1,600,000.00
Dierks, Saline River (3c6)	$466,000.00

Appropriations for Fiscal Year 1971 will begin to be considered by the House-Senate Committee on Public Works during the Spring of 1970.

CRISIS ON THE COSSATOT

BY WELLBORN JACK, JR.

"While the destruction of natural values probably could be defended in years past by invoking priorities, the dwindling National treasury of such values now requires that we reassess our priorities, and move to husband those natural values which still remain."

Red River Basin Coordinating Committee
Comprehensive Basin Study, June 1968

Within the short course of the past decade, we have come to live in an age of environmental concern. We are concerned: DDT, smog, pollution, threatened species, vanishing wilderness, devastated rivers, population explosion, blighted cities, ad infinitum. Everywhere and in everything, we are concerned that the world will not long remain a fit place for quality human existence.

Ironically, in the midst of our great concern, work mindlessly continues upon a number of environmentally disastrous projects conceived and initiated years ago before the rise of the current widespread public concern. An example of such a project is The Gillham Dam Project on the Cossatot River of Southwestern Arkansas.

Construction of the Gillham Dam Project was authorized by Congress more than a decade ago upon the then seldom questioned recommendation of the U. S. Army Corps of Engineers, without public hearings, and over the strenuous objections of the Department of Interior. Despite current needs for fiscal austerity, the project received a Congressional appropriation of One Million Six Hundred Thousand Dollars for Fiscal Year 1970.

June 1973 is the Corps' target date for completion of this project and its two sister projects, DeQueen and Dierks Dams on the nearby but considerably smaller Rolling Fork and Saline Rivers. When these projects are completed, all of the major recreational rivers of the Ouachita Mountains of Southwest Arkansas will have been dammed. Our nation's resource of free-flowing streams in this region, now an endangered species, will have become extinct.

Until recently, the plight of the streams of the Ouachita Mountain Region was overshadowed by heroic efforts to save the Buffalo River in the Ozarks of Northern Arkansas. That goal has now been brought to imminent reality with the help of current widespread public recognition of the value of stream preservation. The critical situation in the Ouachita Mountain Region of Southwest Arkansas now requires that we direct our immediate attention and efforts to that region if anything at all is to be salvaged there.

There is still time remaining within which to take affirmative action to preserve at least one representative Ouachita Mountain stream. Although the Gillham Dam Project on the Cossatot is presently considered 60 per cent complete over-all, construction of the dam itself has not yet been started. Nothing has yet been built across the river. Present Corps plans schedule the initiation of construction of the dam itself for July 1971. The Cossatot can be saved.

At the November 1969 annual meeting of the Ozark Society, it was resolved that:

1. Congress immediately halt construction of The Gillham Dam Project pending a restudy of the project and the conduct of public hearings.
2. The United States Department of Interior be directed and funded to conduct a detailed study of the environmental consequences of the Gillham Dam Project in light of present conditions.
3. Informed public hearings be held to determine public desires in regard to this project in light of present conditions.

Time is of the essence if a single representative stream of the Ouachita Mountain Region is to be preserved. This can be done only by bringing a halt to construction of the Gillham Dam Project on the Cossatot River. Continued construction of this Project is dependent upon continued annual Congressional appropriations. If it was a mistake to authorize this Project, it is a genuinely tragic mistake to continue to fund it blindly to completion.

The Cossatot River; Now a Unique Resource.

The Ouachita Mountains of Southwest Arkansas are geologically distinct and noticeably different in appearance from the Ozark Mountains of Northern Arkansas. The streams of the two regions differ. The gravel shoals and boulders of the Ozark streams are replaced in Ouachita streams by rapids and small waterfalls over steeply tilted rocks. Choice stretches of Ozark streams are typified by bluffs or steep hills on one side and flat land or gravel bars on the other. Choice stretches of Ouachita streams are typified by being tightly hemmed-in by steep hills on both sides.

Unfortunately, these choice scenic stretches of the Ouachita Mountain streams also make the best dam sites. On most of our Ouachita streams, these choice stretches are lost forever from view beneath the waters of reservoirs. The remaining upstream segments of the Ouachita River, the Caddo and the Mountain Fork flow through relatively flat basins which only vaguely suggest the scenic character of the hemmed-in stretches buried beneath the reservoir waters.

The Cossatot typifies the unique scenic characteristics of the choice but now lost stretches of these better known Ouachita Mountain streams. From its source high in the Cossatot Mountains

WELLBORN JACK, JR. FISHING THE COSSATOT PHOTO: R. A. HUTCHINSON

of the Ouachita National Forest near Mena, to the Highway 70-71 Bridge near DeQueen where it enters the flat lands of the Gulf Coastal Plain, the Cossatot cuts its way stubbornly from north to south across the east-west running ridges of the Ouachitas.

For the first seventeen miles of its course through the Ouachita National Forest, the Cossatot is scarcely distinguishable in size from other creeks of the region. It first becomes recognizable as a major water course at the Highway 246 bridge just below the confluence of Bushy Creek. Here the river enters and flows for the next eight miles through the precipitous gorge of the "Shut-ins" containing the "Cossatot Falls" and numerous truly spectacular rapids. This area has been recommended for preservation as a unique natural area by the Red River Basin Coordinating Committee in its eight volume interagency basin study of June 1968. Clear run-off and high water quality are insured by the heavily forested and undeveloped character of these headwaters regions.

The river first becomes floatable at the end of the "Shut-ins", marked by Devil's Hollow Falls, two miles up stream from the Highway 4 Bridge. Smallmouth Bass fishermen and canoeists regularly put in at the Highway 4 Bridge. Downstream from here for sixteen and a half miles, the river continues tightly hemmed-in by rocky undeveloped ridges and timbered hills on either side until it crosses under Ladd Bridge (Highway 380). Gillham Dam site is eleven and a half miles below the Highway 4 Bridge and five miles above Ladd Bridge.

The ten-mile stretch of river from Ladd Bridge downstream to the Highway 70-71 Bridge is a transitional zone along which the river slowly assumes the characteristics of a bottomland stream as the hills on either side recede from its banks. Below the Highway 70-71 Bridge the transition is complete. For the remaining thirty-three and a half miles of its course, the Cossatot gently meanders across the Gulf Coastal Plain as a choice bottomland stream before reaching its confluence with the Little River.

Out of the entire eighty-seven mile length of the Cossatot River, only eighteen and one half miles can be characterized without qualification as a floatable mountain stream. This is the stretch from Devil's Hollow Falls (two miles above Highway 4 Bridge) to Ladd Bridge (Highway 380). This stretch best represents the characteristics, once common but now unique, of those stretches of the Caddo, the Ouachita, and the Little Missouri which now lie buried beneath the waters of reservoirs. If a single stretch of stream is to remain to represent the unique characteristics of Ouachita Mountain streams, then it is critical that the stretch from Devil's Hollow Falls (two miles above Highway 4 Bridge) to Ladd Bridge (Highway 380) be preserved. This is the stretch to be destroyed by Gillham Dam.

RUNNING DUCKETT FORD FALLS PHOTO: VIRGINIA JACK

Gillham Dam and Reservoir: the "Government Frog Pond."

The dam is to be a simple earth-fill structure, 1,750 feet long and 160 feet high. Water is to flow neither over nor through this structure but either over a spillway in an adjacent saddle or through a ten foot diameter hole (the outlet works) bored in the hill intervening between the dam and the spillway.

Nothing has yet been built across the river. Project progress to date consists chiefly of land acquisition and construction of an access road, project building, the outlet works, and 87 per cent of the spillway. Construction of the dam itself has not yet been initiated. Work on the dam is scheduled to start in July, 1971.

Total estimated project cost is $14,800,000.00. The project is currently considered 60 per cent complete. If this figure represents a percentage of total project cost, Federal funds expended to date are approximately $8,880,000.00. (These figures are to be seen in the perspective of the current cost of one controversial F111 jet fighter bomber, $8,000,000.00, and the anticipated cost of one new F15 jet tactical fighter, $13,500,000.00.)

Gillham Dam will not produce hydroelectric power. Project purposes are flood control and water supply. The following reservoir elevations have been established by the Corps for project purposes:

Top of flood control pool	569 feet
Top of conservation pool (normal)	502 feet
Ten year frequency drawdown	474 feet

These pool parameters provide for a vertical seasonal fluctuation in reservoir level of 67 feet annually and 95 feet once every ten years. As a result of this fluctuation, the reservoir itself will seasonally vary in surface area as follows:

Top of flood control pool	4,200 acres
Top of conservation pool (normal)	1,370 acres
Ten year frequency drawdown	500 acres (approximately)

Miles of Cossatot River above the dam inundated will also seasonally vary:

Top of flood control pool	13.5 miles
Top of conservation pool (normal)	7.7 miles
Ten year frequency drawdown	4.2 miles

Mud flats, denuded hillsides, water stained rock outcrops, and problems of access resulting from this fluctuation can be expected to severely limit aesthetic appeal and recreational potential of the reservoir.

Stream losses are not limited to the area inundated by the reservoir. For many miles below the dam site, the river will be largely dependent upon reservoir releases for the maintenance of stream flow. Legislation specifying minimum releases for the maintenance of stream flow was recommended by the Department of Interior for this project but has not been adopted. In this regard, the comments of the Department of Interior relative to this project are appropriate:

"On the basis of operational data available, it is assumed that there will be periods when no releases will be made from the reservoir. As a consequence, in comparison with historical conditions, the zero flows will be more frequent during project operation and are ex-

pected to make most of the stream habitat (downstream) unsuitable for Smallmouth Bass and some segments unsuitable for any game species."

At its best (conservation or normal pool) the reservoir will consist of little more than a small and narrow strip of water averaging only a few hundred yards or less in width. Numerous small watershed projects have been planned by the Soil Conservation Service with permanent pools considerably larger than the prophesied 1,370 acre normal pool of Gillham. By stopping the flow of the river, the reservoir will destroy the increasingly scarce prime Smallmouth Bass habitat provided by the river and replace it with Largemouth Bass habitat which has become quite abundant in the general vicinity due to the construction of other reservoirs.

It is noteworthy that the picture on the cover of the public information pamphlet for this reservoir distributed by the Corps depicts the reservoir, not as a pristeen mountain lake, but as a short stretch of water studded with dead and dying trees. One informed resident of the area refers to the project as "the Government frog pond". Another longtime resident of the area opines, "About the only thing that thing is good for is messing up a lot of beautiful scenery."

How Gillham Happened: the dubious offspring of Millwood.

Construction of Gillham Dam was authorized by Congress in 1958 for flood control on the Red River below Fulton, Arkansas. Fulton lies at the mouth of the Little River, one of many tributaries of the Red River. The Cossatot River is one of six major mountain streams tributary to the alluvial Little River in Arkansas and Oklahoma. Ninety-two and a half miles of Cossatot and Little River separate Gillham Dam site from Fulton, Arkansas. Drainage area of the Cossatot above the Gillham Dam site (271 square miles) is insignificant in comparison with the total area drained by the Little River (4,260 square miles).

How the relatively insignificant and remote headwaters of the Cossatot River came to be included in the plan for flood control on the Red River below Fulton, Arkansas is an instructive story. The story is set forth in some detail by the report of the Chief of Engineers dated October 19, 1956, and accompanying papers, entitled "Millwood Reservoir and Alternate Reservoirs, Little River, Oklahoma and Arkansas", published by the United States Government printing office in 1957 as House Document 170, 85th Congress, First Session.

Originally, the Corps planned to control the seasonal flood water contribution of the Little River to the Red River by construction of a single large reservoir 16 miles above the mouth of Little River in Arkansas. Upon the recommendation of the Corps, Congress authorized construction of this reservoir in 1946. It was to be known as Millwood Reservoir. It was to have been of the dry bed type with a flood storage capacity of 2,208,000 acre feet which would inundate 107,000 acres, most of which was considered valuable hardwood timber land. It was never built pursuant to that authorization.

The Corps deferred requesting appropriation for the initiation of construction of the originally authorized Millwood Reservoir and instead, in the Flood Control Act of 1950, sec. 205, obtained authorization from Congress for the "survey and study of **alternate sites** for Millwood Reservoir" (emphasis added). The only specific example of objection to the location of Millwood Reservoir cited by the Corps in House Document 170 is that mentioned briefly by the District Engineer on page 16:

"Certain local interests believe that construction of Millwood Reservoir would result in elimination of the hardwood timber in the reservoir area as a source of supply for a commercial lumber mill at Broken Bow, Oklahoma; that this mill would then be forced to cease operation; and that the removal of this principal industry now operating in the area would further lower the income of the people in the area."

On October 15, 1955, the survey and study authorized by the Flood Control Act of 1950 was completed by the District Engineer and forwarded as a report to the Chief of Engineers who approved the same in his report with but minor modification. The subject of the reports: not **"alternate sites"** for the authorized Millwood Reservoir, but an **"alternate reservoir system"**.

The reports recommended construction of Millwood Reservoir **at the original site** but with flood storage capacity reduced by 25 per cent and, to compensate for this loss of flood storage capacity, called for the construction of six additional dams and reservoirs upstream on the mountain streams tributary to the alluvial Little River in Oklahoma and Arkansas. The six upstream reservoirs are shown on the accompanying map as 3c1 through 3c6. Gillham on the Cossatot is one of those reservoirs.

In due course, Congress passed the Flood Control Act of 1958 authorizing construction of the modified Millwood Reservoir and six upstream reservoirs "substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 170, 85th Congress." In so doing, Congress authorized construction of Gillham on the Cossatot without even mentioning it by name.

Administrative patience had been rewarded. The Corps by its forbearance had parlayed an unused authorization for one reservoir into an authorization for construction of seven reservoirs at twice the original cost. Three of these reservoirs have now been completed: Millwood (3c), Pine Creek (3c1), and Broken Bow (3c3). The other four are under construction.

For the alleged sake of a hardwood mill at Broken Bow, Oklahoma, the last free flowing Ouachita Mountain streams of Oklahoma and Arkansas had been sacrificed. Ironically, for that hardwood mill, the alternate plan for Millwood Reservoir failed to achieve a substantial reduction in the size of the flood control pool of the original Millwood Reservoir, which had been deemed so objectionable by the Corps because of its destructive effect on the valuable hardwood timberland. Proposed flood pool surface was reduced from 107,000 acres to 100,000 acres. A net reduction of only six per cent!

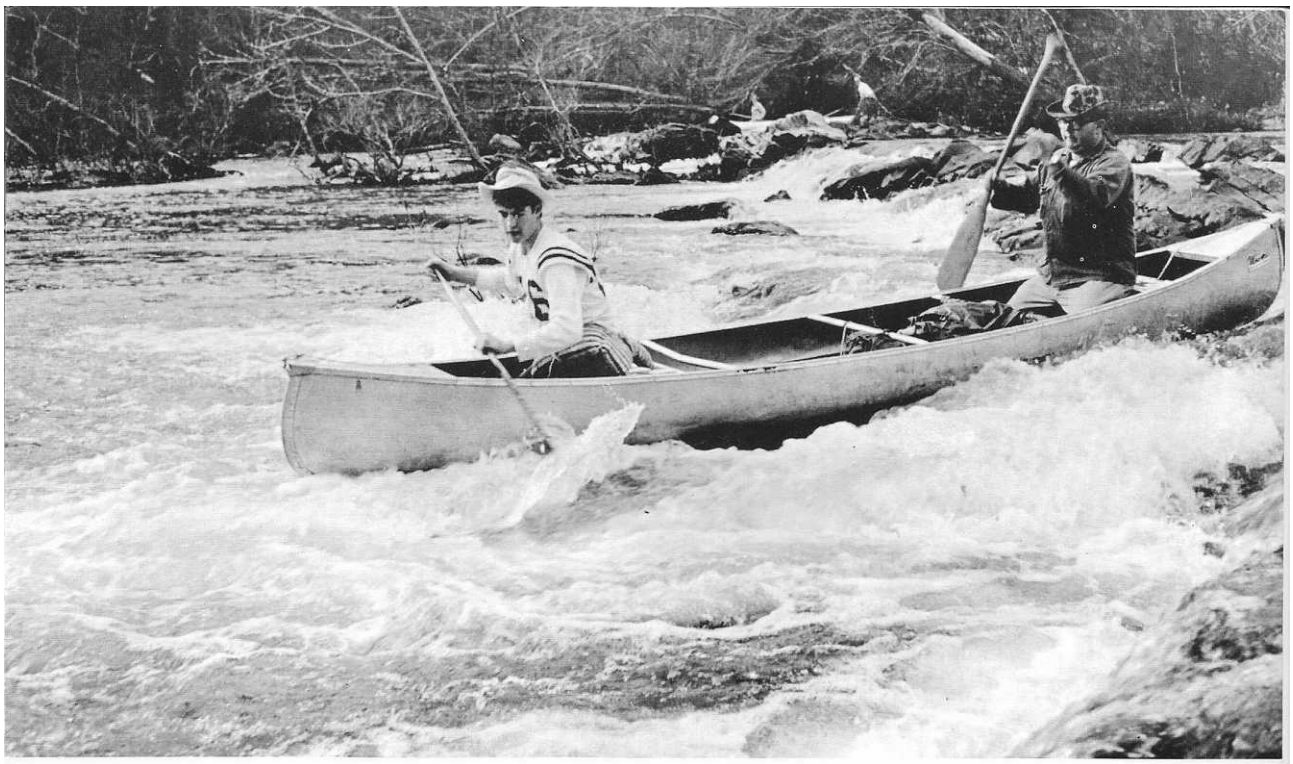
Four Times Enough Water Supply For the Year 2080.

A benefit-cost ratio of 1.47 was calculated on paper for the alternate plan only by including within each of the seven reservoirs water supply storage sufficient to provide for the project as a whole a dependable daily yield of 621 mgd (million gallons per day). This yield is 40 times greater than the 15.3 mgd actually used in the seven reservoir region in the year 1965. Of greater relevance, it is approximately 8 times greater than the 80.1 mgd requirement projected for the region in the year 1980. Incredibly, it is more than 4 times enough to satisfy the 133.2 mgd requirement projected for the region in the year 2080. Actual and projected water use and needs for the seven reservoir area have been taken from Tables 1 and 21 prepared by the United States Department of Interior, published in appendix XI, Volume 6, **Red River Below Denison Dam; Arkansas, Louisiana, Oklahoma, and Texas; Comprehensive Basin Study, published June, 1968.**

The Department of Interior by letter of November 15, 1956, (House Document 170, page XII) objected to the claimed water supply benefits in the following strong language:

"Reviewed in the light of requirements of the Bureau of Reclamation in the Department of the Interior, the report does not clearly show the need for water, a plan for use of the water, economic justification and feasibility, repayment willingness, and contracting ability of the potential water users, or project water rights."

The Bureau of the Budget, Office of the President, expressed reservation by letter of February 28, 1957 (H. D. 170, p. v) in regard to the willingness of the States of Arkansas and Oklahoma to repay to the Federal Government within 50 years that part of Federal investment allocated to water supply, which was then estimated at $55,781,000.00 out of a total first cost of the proposed system of reservoirs estimated at $103,035,000.00. Repayment by the States of this $55,781,000.00 was required by the Report of the



"TINY FALLS" BETWEEN HIGHWAY 4 AND DUCKETT PHOTO: LLOYD NAYLOR

Chief of Engineers in House Document 170 adopted by reference by Congress in the Flood Control Act of 1958 cited above.

There is no present or foreseeable need for the 60 mgd water supply of Gillham which cannot be satisfied by the 19 mgd yield of Dierks Reservoir (3c6) and the 32 mgd of DeQueen Reservoir (3c4), both of which are located within 10 miles east and west of Gillham. Also to be considered is the 265 mgd yield of Millwood to the south which is approximately twice the requirement estimated for the year 2080.

If unforeseen future requirements for additional water supply were to develop in the vicinity of Gillham, it would be a simple matter to reallocate unneeded flood storage capacity to water supply in the nearby Dierks and DeQueen Reservoirs. Of course, in the unlikely event that current projections based on present birth rates are low and actual needs of the future for water cannot be met from other reservoirs, there will be ample time then to complete construction of the Gillham Dam Project. There is no present or foreseeable need to complete it now.

No Need For Flood Storage Capacity of Gillham.

The report of the Chief Engineer in House Document 170 recommended a 25 per cent reduction (542,000 acre feet) in the flood storage capacity of the originally authorized Millwood to be compensated for by the construction of six upstream impoundments with the following storage capacities, expressed in acre feet:

Pine Creek Reservoir, Upper Little River	378,000
Lukfata Reservoir, Glover Creek	172,000
Broken Bow Reservoir, Mountain Fork River	443,000
DeQueen Reservoir, Rolling Fork River	101,000
Gillham Reservoir, Cossatot River	164,000
Dierks Reservoir, Saline River	66,000
Total upstream flood storage capacity	1,324,000

This table shows that the Chief Engineer's report recommended construction of upstream capacity **two and one-half** times greater than the storage capacity removed by his own recommendation from Millwood. The report of the District Engineer attributes this discrepancy to unexplained "deficiencies in channel capacities and other associated conditions." (See page 17, House Document 170).

Subsequent events have made extremely questionable the alleged necessity of storing that much water upstream. Millwood and two upstream reservoirs, Pine Creek and Broken Bow, have now been completed. Recent events suggest that the other four upstream reservoirs are not needed for flood control on the Red River below Fulton.

During the Summer of 1969, the elevation of the conservation pool (water supply and sediment reserve) of Millwood was raised from elevation 257.00 to 259.2 resulting in a reduction of the flood storage capacity of Millwood by 59,100 acre feet. The following explanation for this reduction in flood storage capacity was given by the letter of 10 June 1969 of the Resident Engineer, Millwood Resident Office, Tulsa District, Corps of Engineers, Department of the Army:

"The closing of the Broken Bow and Pine Creek Dams has more than compensated for the minor loss of flood storage which will result from raising the pool."

This action and explanation of the Corps itself contradicts its claim that completion of all upstream projects now under construction is necessary for flood control on the Red River below Fulton, Arkansas. The completion of just two upstream reservoirs, Broken Bow and Pine Creek, appears to have already **over-compensated** for the 25 per cent reduction at Millwood.

The report of the Chief of Engineers published in House Document 170, dated October 16, 1956, alleged that the completion of **all six** upstream impoundments was necessary for flood control below Fulton. The action of the Corps, explained in the Resident Engineer's letter of 10 June 1969, implies that completion of **only two** upstream impoundments is really needed for flood control below

Fulton. A possible explanation for the contradiction between the 1956 report and the 1969 action of the Corps is suggested by reflecting upon the remarks of the Department of Agriculture, dated December 20, 1956, and published in House Document 170 with reference to the report of the Chief Engineer:

"The report does not provide basic data on agricultural flood damages or any data on how a more remunerative agricultural use will be made of the bottomlands lying below both the tributary and Millwood Reservoirs. Consequently, we cannot appraise the agricultural benefits claimed in the report."

Need may never have existed for the full storage capacity of the original Millwood!

Objections of the Department of Interior.

Even in those relatively dark ages of environmental non-concern, the reports of the Chief Engineer and District Engineer recommending authorization of the alternate plan were not received without objection. The strenuous objections of the Department of Interior are generally set forth by that agency in its letter of November 15, 1956 which appears on page XII of House Document 170:

"The project will inundate or otherwise modify 152.5 miles of stream fisheries in Little River, 212.4 miles of streams directly tributary to Little River, and over 41 miles of additional tributaries within proposed reservoir sites.

The streams affected are of particular importance to sportsmen over a wide area in Oklahoma, Arkansas, and adjoining states. In addition to the attractive natural setting in which they are located, their clear waters provide excellent habitat for Smallmouth, Spotted, and Largemouth Bass, as well as other important game-fish species. Such stream fisheries today are at a premium. Other water-development projects have already destroyed much of the limited original supply of this type of sport fishing resource which existed in Oklahoma and Arkansas."

— — —

"Conversely, the reservoir lake type of fishery has become quite abundant in the general vicnity of the project. An additional increment of 25,200 acres (the area of project lakes at conservation pool level) is not expected to increase greatly the total amount of sport fishing use in this region. Rather, use of the new impoundments will draw considerably from that which is now made of similar reservoir lake fisheries already in existance. For example, there are 11 which lie within a 75 mile radius of the Broken Bow site."

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"The (National Park) Service further reports that the 6 upstream reservoirs proposed for flood control are located in natural scenic settings on clear mountain streams. The proposed reservoirs would have great fluctuations in water level in order to function as flood-control structures. Consequently, it is believed that, based on the available information, more recreation values would be destroyed by construction of the dams than would be created by them."

— — —

"These extremes in vertical and horizontal fluctuations would impair the recreational value of the reservoir and would create mud flats where a highly scenic area with a clear mountain stream exists."

The Department of Interior further objected that it had not been given sufficient time by the Corps of Engineers to allow an adequate investigation of the full magnitude of the effects of the project. The Fish and Wildlife Cooperation Act of August 14, 1946 required that the reports and recommendations of the Secretary of the Interior "be made an **integral part** of any report submitted" by the Corps of Engineers requesting authorization for a water development project. Because of the indefinite status of Corps plans and the shortness of time allowed by the Corps for preparation of the Department of Interior's report, the recommendations of the Department of the Interior on the alternate plan had to be appended as an incomplete **supplement** to House Document 170.

Recommendations of the June 1968 Comprehensive Basin Study.

Ten years after construction of Gillham Dam on the Cossatot River was authorized by Congress, an eight volume interagency study of the water resource needs of the Red River Basin, of which the Cossatot forms a part, was completed. The work is entitled **Red River Below Denison Dam; Arkansas, Louisiana, Oklahoma and Texas; Comprehensive Basin Study, June 1968,** referred to by abbreviation as RRBDD.

The RRBDD emphasizes the importance of stream preservation:

"The preservation of free-flowing streams will help fill the need for a greater variety of recreation opportunities in the Red River Basin. It will also fill the need for higher quality recreation, with 'quality' defined as the degree to which the recreation experience differs from the ordinary—also the degree to which it stirs our higher senses, our feelings about the beauty of the natural world."

—RRBDD. XII-59

"Stream preservation is of utmost importance for a balanced recreational resource. White-water canoeing and float fishing are highly prized recreational experiences."

RRBDD. XV-56

Specifically, the report recommended the preservation of "60 miles of Cossatot River above Gillham Reservoir" including the "Shut-ins" as a unique natural area:

"Preservation of the 'Shut-ins' area would be partly accomplished by stream preservation plans for the upper Cossatot River. The preservation of these two areas would provide future generations with at least a glimpse of virgin wilderness habitat. Preservation would be justified on the basis of intrinsic aesthetic values which these sites possess."

RRBDD. XIII-22

Construction of Gillham Dam on the Cossatot River would not leave 60 miles of river upstream from the reservoir! Only 25 miles of Cossatot River will remain upstream from the reservoir. Of these 25 miles upstream, the first eight comprise the unfloatable "Shut-ins". For the remaining 17 miles upstream from the "Shut-ins", the river is definitely unfloatable and scarcely distinguishable from numerous other mountain creeks.

The recommendation of the RRBDD cannot be implemented if the Gillham Dam Project on the Cossatot is completed.

What Can Be Done.

There is no need to further document what has been referred to as the "beaver complex" of the United States Army Corps of Engineers. The way is clear for constructive action. There has been enough caterwauling about what the Corps is doing to our world. It is time something be done about it.

A definite need exists for a thorough restudy of water development plans for the Cossatot River. Congress should authorize such studies, not only by the Corps of Engineers which continues to push for completion of the project, but also by the Department of Interior which was never afforded sufficient time to complete its original studies. Public hearings, never held in regard to this project, should be held. Construction of the Gillham Dam Project should be suspended pending the completion of studies and the holding of hearings. No real harm can come from suspension of construction:

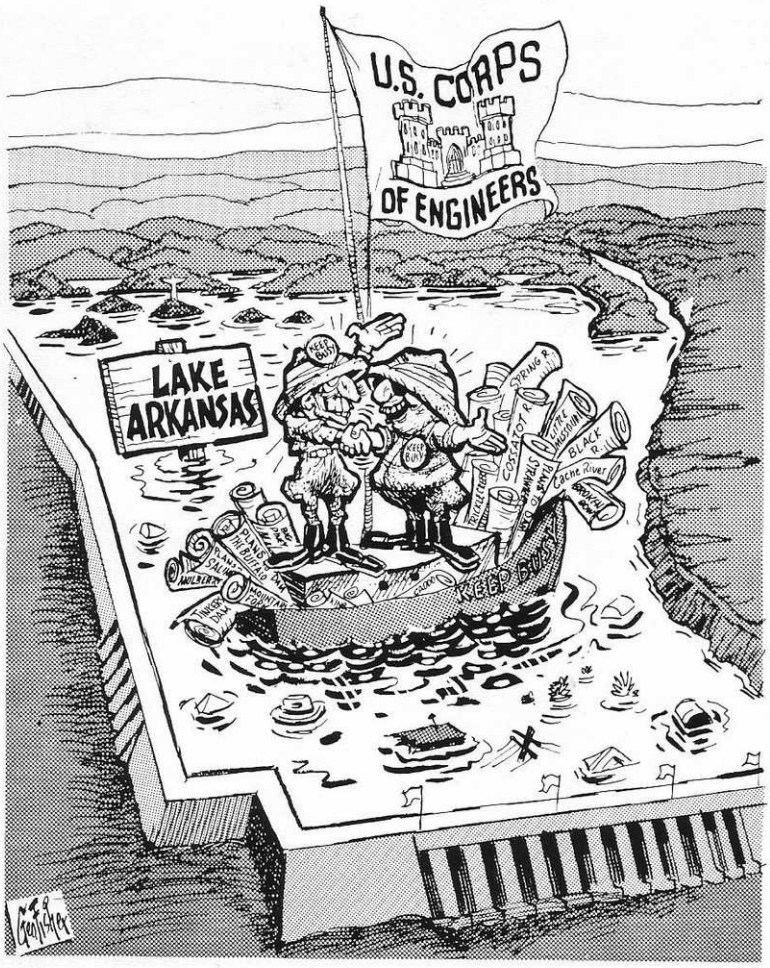
"The deferral for economic or other reasons of any moderate portion of the presently proposed plan for the Little River Basin, other than Millwood Reservoir, would not impose an undue risk of potential flood damages of major proportions under existing conditions of development because of the infrequency of such adverse occurrences, together with the substantial degree of flood protection afforded by the existing levees downstream from Fulton."

Report of District Engineer,
House Document 170, 85th Congress,
Page 18.

Time is of the essence if we are to "re assess our priorities, and move to husband those natural values which still remain," as recommended by the Red River Basin Coordinating Committee, Comprehensive Basin Study, June 1968. The "dwindling National treasury" of free flowing Ouachita Mountain streams is nearly bankrupt.

OUACHITA

Vice President Joe Nix writes that "On November 19 and 20, 1969, the new DeGray Reservoir rose almost 20 feet, flooding the Parker Falls Area in an unbelievably short period of time. The trip, which was to be scheduled to photograph the water rising over this area, was cancelled."



NEWS OF THE CHAPTERS

BAYOU

Bayou Chapter was host to the **Lone Star Chapter of the Sierra Club** on a four day backpack hike into the Caney Back Country November 27-30. Twenty-four participated, nineteen from Texas, two from Louisiana, one from Kansas, and two from Arkansas. Jim Abercrombie of the Mena Ranger District welcomed the participants at the assembly point, Shady Lake Recreation Center.

The temperature dropped to 13 degrees one morning. The movement of the hikers up and down and across ridges overcame any discomfort from low temperatures.

Wellborn Jack, Jr. was trail leader. His interesting report of the hike will be published in the February number of the Sierra Club Bulletin.

The Red River Valley Association, a citizens' organization favoring the damming of tributaries of the Red River to make it navigable, is meeting at Shreveport, March 30-31. Representatives of the Army Corps of Engineers, Congressmen of Arkansas, Louisiana, Oklahoma and Texas are expected to be there. Members of the Bayou Chapter expect to attend and plan to have a booth at the conference. Members from other Ozark Society Chapters would be welcomed by the Bayou group.

At the December General Meeting, the following officers were elected: Chairman — Byron Gibbs; Vice Chairman—"Tip" Davidson; Treasurer—Tom Gilchrist.

"The Outing Committee" extends to all Ozark Society members a very sincere invitation to attend any or all of our chapter outings."

DELTA

Delta Chapter elected the following officers at its annual meeting, December 3: Chairman, Chalmers Davis; Vice Chairman, Dave Robertson; Co-ordinator, Tom Parsons; Secretary-Treasurer, Kathy Gosnell.

Harry Pearson, founder of the chapter and its chairman during the past two years, is to be congratulated upon its outstanding achievements in the field of conservation.

The chapter approved a motion by **Tom Parsons** to begin a major effort in the coming year to send out teams to high schools and colleges in our area that would discuss conservation and chapter work to preserve wild areas in Arkansas. "We might attract new members or start chapters in the colleges in Southeast Arkansas," Parsons said. **Doug Smith** will assist Tom with this project.

Wellborn Jack, Jr. of the **Bayou Chapter** gave the talk of the evening on dam construction on the Cossatot River and what might be done to keep the river in its natural state.

On New Year's Day, Ed Freeman III and son, Andy, led a three canoe float from Greenwood to Amity on the Caddo. Joe Nix of Ouachita and a friend manned one canoe, and Dr. Tom Gilchrist and David Ginsburg, the other.

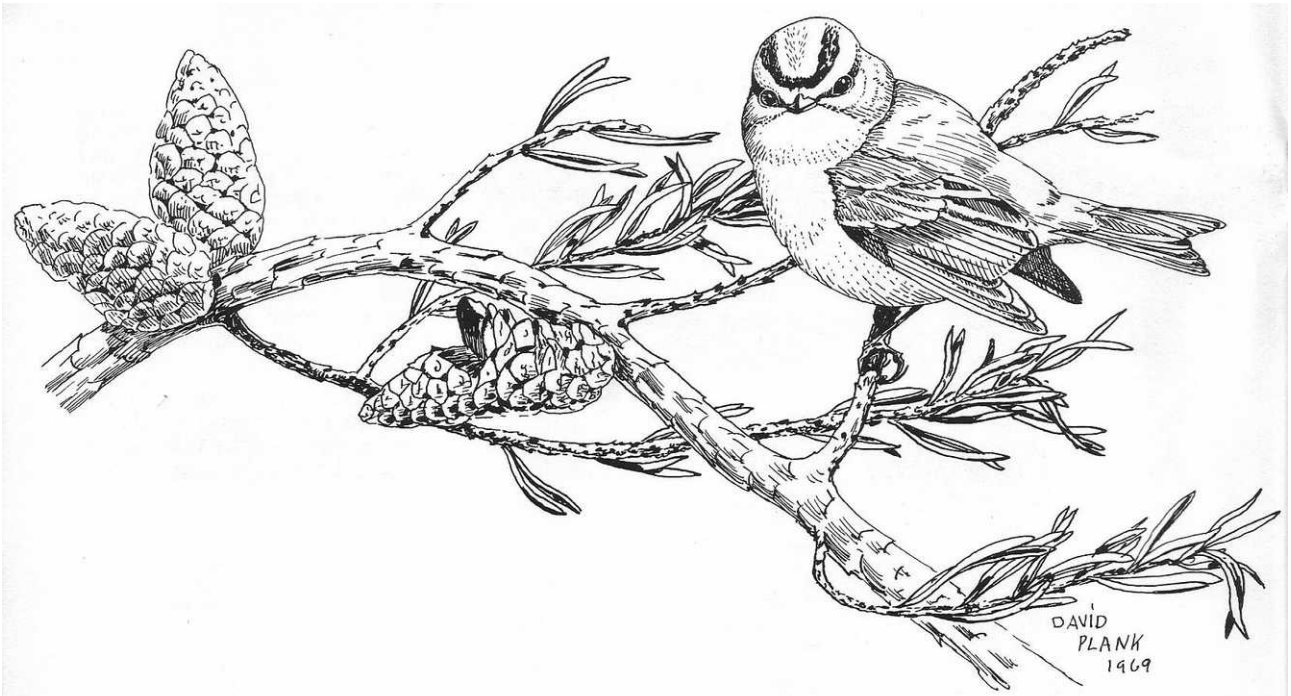
INDIAN NATIONS CHAPTER

The above is the new name for the Northeast Oklahoma Chapter, accepted by the membership at the annual meeting on December 11. New officers elected for 1970 are: Chairman, Lowell Dodson; Secretary-Treasurer, Jean Estep. Bob Ferris was re-elected Editor.

NORTHWEST ARKANSAS

The Whitely and Moore Creek hikes bordering the Upper Buffalo Valley, scheduled for January 17 and 18, were cancelled because of the large accumulation of snow and ice in the deep valleys. A substitute hike of the Moore Creek bluffs was substituted on Saturday, but because of snow and sleet moving in on Sunday morning, further hiking was called off.

The **Richland Creek** overnight backpack hike and the **Indian and Bear Creek** hikes, listed in the Autumn, 1969 Bulletin, were well attended.



KINGLETS

FRANCES JAMES

The smallest birds inhabiting the central southern states in winter are the kinglets. These remarkable balls of feathers weigh only one-fifth of an ounce (7 grams) and are only four and a half inches long. They are not uncommon in the woods and are very tame but they rarely come to bird feeders. Alan Posey and I caught one in a Japanese mist net in December while we were netting several other species for Alan's behavior studies. It permitted us to handle it without struggling and watched us for several minutes from a nearby bush after we let it go. If you know the kinglet calls, you can find one on almost any one mile walk in appropriate woodland habitat.

There are two types of kinglets, the Ruby-crowned and the Golden-crowned. Both come to us in the fall from the northern coniferous forests of Canada where they nest. They are the only truly North American representatives of a large Old World family of warblers. Common kinglet characteristics are wood-gleaning habits, olive plumage, and constant activity. The male Ruby-crowned kinglet has a jewel of red feathers on top which he keeps discretely hidden except when he is excited. The white eye ring and the wing-flitting behavior are the best characteristics for field identification. Ruby-crowned kinglets winter mainly in the southernmost states and are increasingly common toward the Gulf Coast. The report of the 1968-69 New Orleans Christmas Bird Count gives 73 Ruby-crowned Kinglets and three Golden-crowned Kinglets for 19 miles of walking and watching.

The Golden-crowned Kinglet is a far hardier bird, wintering throughout the nation. The male (shown above) has a white line over the eye, bordered above by black. The center of the crown is golden orange surrounded by yellow. The birds often travel in bands with a small group of foraging chickadees, nuthatches, a Brown Creeper and a Downy Woodpecker. They search nervously for tiny insects that are among the pine needles or under the bark of twigs and branches.

No self-respecting physiologist would predict that such a creature would survive a northern winter. Yet these birds seem to prefer it. The Golden-crowned Kinglet may be rare in southern Louisiana in some years but it is always fairly common in Arkansas, Oklahoma, Missouri and Kansas. And its winter range extends right up to Maine and Nova Scotia. The records are still incomplete but some people are saying that in the winter of 1969-70 there are unusually high numbers of this species in the central states. As I sit here in my living room on January 6, I can see dozens of juncos, chickadees, Blue Jays, goldfinches and Purple Finches gobbling up the seeds Doug has put out. There are 10 inches of snow out there and the temperature is 8 degrees F. But to my knowledge no one has ever seen a Golden-crowned Kinglet eat any vegetable matter. Somehow they are able to find insects even at times like this.

One of the most unifying principles in biology is that for animals having a constant internal body temperature (birds and mammals) the metabolic rate is inversely related to the body weight. The smaller the bird the higher the metabolic rate. It is possible to plot the weights of all the birds from a hummingbird to an ostrich (or all the mammals from a shrew to an elephant) along a line and to predict the calories required to keep that animal going for a fixed period of time. This means that the smallest ones must eat relatively more food and take in relatively more oxygen to stay alive than the other animals. The shrews can find a favorable micro-climate beneath the snow but the kinglets must brave exposure to the cold and wind. No wonder they are the most active members of our winter avifauna. Today I salute the Golden-crowned Kinglet.

CONSERVATION AWARDS

GOVERNOR ROCKEFELLER RECEIVES THE EAGLE STATUTTE FROM DR. HANCOCK, PRESIDENT OF THE A.W.F.
PHOTO BY GUNTER, ARKANSAS DEMOCRAT

DR. JEWELL MOORE RECEIVES THE EDUCATION AWARD.
PHOTO BY GUNTER, ARKANSAS DEMOCRAT

HAROLD ALEXANDER RECEIVES AWARD IN CATEGORY OF WATER
PHOTO BY GUNTER, ARKANSAS DEMOCRAT

The 1969 CONSERVATION ACHIEVEMENT AWARDS PROGRAM of THE ARKANSAS WILDLIFE FEDERATION affiliated with THE NATIONAL WILDLIFE FEDERATION and sponsored by THE SEARS-ROEBUCK FOUNDATION was held in Little Rock November 13, 1969.

The event was of special importance to us as the **Ozark Society** was honored as the **Conservation Organization** of the year, and two members of the society received awards. Dr. Neil Compton, president of the Ozark Society, accepted the society's award. **Dr. Jewell Moore,** Professor of Biology at State College of Arkansas at Conway, was honored in the category of **Education. Harold Alexander** of the Arkansas Planning Commission received the award in the category of **Water.**

The award for **Arkansas Conservationist of the Year** went to **Governor Winthrop Rockefeller.**

Other Conservation honorees were: **Forest: Robert C. Rhodes,** Arkadelphia; **Soil: C. O. "Jack" Ware,** Junction City; **Communications: Maurice Moore,** Little Rock (The Arkansas Democrat); **Youth Conservationist: Tommy Cantrell,** Springdale.

The last issue of the Bulletin carried a note in regard to **David Strickland** of Muskogee, Oklahoma having received the award as the Governor's Conservationist of the year for Oklahoma. David is president of the Scenic Rivers Association of Oklahoma and is a member of the Ozark Society. After the Bulletin went to press, we received the **Outdoor News,** official publication of the Oklahoma Wildlife Federation which included the complete story of the Awards Program and a picture of David receiving the Bald Eagle statuette. At the same program, Senator Henry Bellmon of Oklahoma was presented the award for the Conservation Legislator of the year. Margaurite Baumgartner, ornithologist, newspaper columnist and author, whose column many of us read, received the award of the Conservation Communicator of the year.

A note from the State Committee on Stream Preservation

During the last session of the Arkansas Legislature, a bill to create an Arkansas Scenic Rivers System was introduced into the Senate. This bill was never called to the floor for a vote.

The State Committee on Stream Preservation has requested Governor Rockefeller to include the Scenic Rivers issue in his call for a special session of the legislature early this spring. Assuming that the Governor will make this issue a part of the call, it will be extremely important that the conservationists of Arkansas react by contacting legislators throughout the state. Please take it upon yourself to write, call, or better yet, personally contact the legislators in your district concerning this vital issue.

Joe Nix

The mid-winter issue of **Arkansas Game and Fish,** published by the Arkansas Game and Fish Commission, carries an article by **Harold Alexander** entitled "Stream Preservation, an Urgent Task." In this article, Mr. Alexander does an excellent job of explaining the basic points of the proposed legislation. These magazines are being mailed to all Ozark Society members. The points discussed in this article should be useful to you in informing your legislator.

Joe Nix

John Heuston in Paddle Trails

Perhaps it was the awed astronauts' comments about the singular beauty of lonely Earth in the vastness of space that triggered this nation's sudden, sincere concern about our fragile environment. We don't know.

But we do know that never before have so many people in so many different walks of life been so concerned about problems Ozark Society members have recognized for years. Air and water pollution, park desecration, dwindling areas of hardwoods and wildlife habitat, and the dam-nation and channelization of our rivers and streams are topics on the lips of people who never gave such problems a thought before.

This is good. But this newly awakened emphasis on conservation,—nay, more than that, "environmental preservation," is going to need direction and guidance if it is to be a positive force.

This is why the Ozark Society needs YOU . . . Now, more than ever before. It is a new year and a new decade—and we may not have many of those left if action is not taken NOW!

Scenic Rivers

February 9, The Oklahoma House voted 89-5 for a bill to establish three **scenic river areas in** eastern Oklahoma and to prevent the building of dams on the rivers without the consent of the Legislature.

Designated as scenic river areas are: Upper Mountain Fork above Broken Bow Reservoir. The Illinois River above Tenkiller Reservoir, and Barren Fork Creek. This should prevent the construction of a dam planned by the Corps of Engineers at Chewy Bridge on the Illinois.

BOTANICAL NOTES

MAXINE CLARK

Winter hikes afford an excellent opportunity to observe the characteristics of deciduous woody species and to study interesting perennial plants of the forest floor. The hikes must be leisurely with time to investigate and explore narrow rocky ravines and the rich alluvium bordering streams. Study the branching habit, bark, and silhouette of the various trees. Pick up acorns, nuts, fruits, and seed pods if the squirrels and birds have left any. Notice the different types of evergreen ferns: the Christmas fern, marginal wood fern, resurrection fern, rock-cap fern and walking fern are fairly common in protected habitats. Take time to look and enjoy!

Do you know it is possible to identify a tree or shrub by the characters you can read on a twig? Each species has its own distinctive winter buds for next year's leaves and flowers, and leaf scars from last years leaves. This method of identification is helpful all through the year except for a period during early spring and summer when the twigs are making rapid growth and next year's buds are not completely formed.

I suggest that you carry a notebook and collecting bags; plastic bags will do if you place them in a snag proof cloth bag. I carry my small clippers in a leather sheath which I fasten to my belt. Snip twigs, tagging each one with a number; enter the number in your notebook with a general description of the source tree or shrub.

You are now ready to spend a pleasant evening in the warmth of your home identifying the collected twigs. This may be accomplished by using a 10x or 14x hand lens and a twig key. An excellent key now available is **"Fruit Key and Twig Key to Trees and Shrubs"** by William Harlow, PH. D. Professor of Wood Technology, State University of New York, College of Forestry, Syracuse, New York. This high quality paperback is published by Dover Publications, Inc., New York; the price is $1.35. However the key is not all inclusive for the Ozark, Ouachita areas.

A word of caution; don't cut twigs from coarse vines or sprawling shrubs bearing white berries or aerial rootlets along the stem. POISON IVY! Without touching it is well to acquaint yourself with the appearance of this plant when the telltale three leaflets are absent. A member of our family cut a twig from an innocent looking vine in a treeless vacant lot on Christmas Day and he was unrecognizable through New Years.

We have two species of poison ivy: **Rhus radicans,** a high climbing vine with aerial rootlets and **R. tocicodendron** without aerial rootlets. Both have grayish white berries; the latter is often called poison oak which is a misnomer. There is another species called poison sumac or dogwood, **Rhus vernix** which has 7-13 leaflets instead of the usual three. It is found in woody, swampy areas from Florida, west to Texas, north to Maine and Minnesota. I have never seen it in Arkansas, although it could be in the Mississippi River lowlands. Steyermark does not list it as occurring in Missouri.

An interesting phenomenon which we have observed repeatedly is the formation of "frost flowers". We have been amazed that these are always at the base of a little mint, dittany, **Cunila origanoides,** and felt rewarded when we later read the following description in Steyermark **"Flora of Missouri."** "During the first frosty days of fall this species is one which produces the so-called 'frost flowers', those white ribbonlike, fluted, and sometimes twisted ice formations about 2.5-5 cm. broad sent up from the base of the plant. These formations of ice result from the rise of the cell sap and moisture from the still active root into the dead and dry stem. The sap which oozes above the ground from the cracks of the stem become solidified, forming the ice and continually freezing on the inner edge and forcing that already frozen towards the anterior edge of the ribbon." He further states that this phenomenon may occur on two species of the Composite Family and one of the Rockrose Family. **Cunila** is a most attractive perennial, under a foot high, has numerous small blue-lavender flowers clustered in the axils of the leaves which occur on opposite sides of the square stem. I grow it in my rock garden and always enjoy it when it blooms in late summer. Because of the specific name **origanoides,** I wonder if the dried leaves could be used as a substitute for the Greek origano used in salads and meat dishes.

Two evergreen species of the Orchid Family may be recognized on the forest floor and are indicative of a protected area rich in humus where one may expect to find other rare plants in the summer. In the alluvium of Richland Creek, Sweetin Creek, and the upper Kings River we have seen the single blue-green leaf of a rare orchid plant called "puttyroot" or "Adam and Eve" (botanically known as **Aplectrum hyemale**). In the fall the large oval ridged leaf emerges from a round tuber which is connected by a cord-like root to last year's tuber. There may be three or four tubers in the chain. The leaf persists all winter until the naked flowering stem emerges from the leaf base. In May or June there may be from 8-20 greenish purple flowers surmounting the stem. No other leaves are produced all summer. We have never had the opportunity of hiking these same areas in the spring to see the flowers, and wonder if we could locate them without the leaves.

Rattlesnake plantain, **Goodyera pubescens,** is easily recognized in the winter by its dark green leaves with prominent white veins. This we have seen on the banks of Richland Creek and in the headwater country of the Mulberry River and have photographed it blooming in August. The flowers are not as spectacular as the foliage but in the same area in May we have seen the nodding pagonia, the yellow lady-slipper, and the showy orchis in bloom.

ANNUAL MEETING, THE OZARK SOCIETY

MAJESTIC HOTEL, HOT SPRINGS, ARKANSAS NOVEMBER 15-16, 1969

Following the registration of about fifty members, the meeting opened with chapter activity reports: Bayou, Mrs. B. B. Gibbs; Delta, Harry Pearson; Northwest Arkansas, Richard Murray; Northeast Oklahoma (Indian Nations), Jack Van Nest; Ouachita, Dr. Joe Nix; Pulaski, Everett Bowman.

Several significant observations can be made from these excellent reports. The chapters are actively promoting interest in conservation and in some instances are undertaking important projects special to their areas, thus broadening the scope of the Ozark Society. They are enlisting the interest of young people, making contributions to help inform the public and the legislators. Through their outing activities, they are enjoying congenial companionship in a natural environment.

Wellborn Jack, Jr., Shreveport, gave an eloquent talk, illustrated with slides, on behalf of saving the Cossatot River, urging re-study and re-evaluation of the construction of Gillham Reservoir with a view to possible halting of the project already underway. He stated that no public hearings were ever conducted and believes that in the interval since authorization there has been a change in the public attitude and that reconsideration could lead to disapproval of the project.

James E. Brewer, deputy forest supervisor, Ouachita National Forest, enumerated eleven areas of back country within the Ouachita National Forest, which will be protected from timber cutting and road building. The Ozark Society was invited to become acquainted with and to study and appreciate the diverse values inherent in these areas, and assist with the establishment of a use pattern proper to their future integrity.

Andrew Hulsey, Director, Arkansas Game and Fish Commission, spoke of the importance of the Commission as a preserver of habitat within the land under its control and of the need for protection of the natural environment. He urged that conservationists make themselves heard outside their own particular groups.

Bernard Campbell, State Coordinator for Natural Parks, summarized the situation as to the proposed Buffalo National River. He mentioned the misleading ideas which have been circulated in some areas, but regards the cuts in Federal funds as the greatest handicap to the work of the Service at present.

William J. Allen presented, for the Arkansas Conservation Council, a statement of policy for the administration of natural resources. The Council is a confederation of private state organizations to promote public recognition of resource needs and the benefits to be derived from sound management.

The Council's recommendations include an inventory of natural resources of the State, a comprehensive plan for all such resources which would require participation by all appropriate state agencies, local government subdivisions, and private landowners, and provision for efficient administration, investigative processes, and for implementation—the latter through creation of af independent Council of Advisors appointed by the Governor and composed of citizens with outstanding interest in public affairs and comprehension of the issues involved.

A Conservation Bill of Rights incorporated into the State Constitution would provide the legal framework for integration of effort for all state agencies, for professional competence of employees, and would preclude the subordination of the public interest to that of small groups.

Dr. Compton spoke briefly on the possibility of mistaken judgments in regarding conservation as being divided along political lines.

During the evening session, Leo Thiels, Recreation Staff Assistant with the Ozark-St. Francis National Forests, presented the KARK-TV movie of white water canoeing on the Mulberry. He told of his organization's activities and interest in preserving prime areas within the Forest boundaries.

The Ozark National Forest's principal recreational project since 1963 has been the development of Blanchard Springs Caverns into a major tourist attraction. This development has gone along slowly because of inadequate funding but should be at least partially open to the public within the next year or two.

Near Blanchard Springs, the Forest Service has two wilderness areas to consider for preservation and is investigating others. New campsites and access points along the Big Mulberry were described. These are being constructed to increase the recreational value of the stream.

The evening session concluded with the showing of a film, "Downstream," a copy of which was purchased by the Ozark Society from the Missouri Conservation Commission. This film features the streams of the Missouri and Arkansas Ozarks.

Business Session

George Kinter, treasurer, presented a financial report covering the period November 20, 1968-November 21, 1969.

The matter of an increase in dues was discussed. A motion was passed to adopt the following schedule, to take effect January 1, 1970: $5., **Regular** and **Family**; $1., **Student**; $10., **Organizational**; $10 or over, **Contributing**; $25., **Sustaining**; $100., **Life.**

The nominating committee, Joe Marsh Clark, Richard Murray, Chalmers Davis, presented the following names for officers: Dr. Neil Compton, president; Dr. Joe Nix, vice president; Harold Hedges, vice president for outdoor activities; George Kinter, treasurer; Evangeline Archer, secretary. Their report was accepted and there were no nominations from the floor.

Resolutions were presented expressing:

Support for the Buffalo National River;

Opposition to alterations on the eastern Saline River;

Support of establishment of Arkansas Scenic Rivers System;

Recommendation of inclusion of Conservation Bill of Rights to Arkansas Constitutional Convention;

Provision for preservation of Arkansas stream banks;

Need for preservation of scenic values along Arkansas Highway 7;

Opposition to dams on the Mulberry River (Big Mulberry Creek);

Support for U. S. Forest Service in preservation of Mulberry watershed;

Support for reconsideration of dam on the Cossatot;

Support for preservation of Illinois River as an Oklahoma Scenic River;

Support for establishment of Oklahoma Scenic Rivers System;

Support for establishment of Louisiana Scenic Rivers System

The group expressed thanks to Colonel Jack Diggs for the resolutions which he prepared for the Society, to Wellborn Jack, Jr. for his presentation regarding the Cossatot, and to Joe Marsh and Maxine Clark as editors of the Bulletin.

Wilhelmina State Park was agreed upon as the place for the spring meeting of the Society.

Following the business meeting, a tour of Hot Springs National Park was made through the courtesy of Mr. Bernie Campbell.

Evangeline Archer, Secretary

ACTIVITY SCHEDULE

Those wishing to participate in any activity are requested to contact the leader at least one week in advance. It is often necessary to make changes in plans. Send a self addressed envelope to leader or chapter chairman for final details and instructions.

OZARK SOCIETY CENTRAL ORGANIZATION

Apr.	18-19	**SPRING MEETING, Wilhelmina Lodge, Queen Wilhelmina State Park** located on 2800 foot Rich Mountain (P. O. Mena, Ark.) Reservations for rooms should be made in advance. Excellent campground is available.	
Apr.	25-26	**FLOAT BUFFALO RIVER—Ponca to Pruitt**	Harold Hedges, Ponca, Ark. 72670 Ph. 428-5445
Apr.	26	**SPRING BUS TOUR out of Fayetteville**—to be announced	

NORTHWEST ARKANSAS CHAPTER

Feb.	21-22	**HURRICANE CREEK, backpack from Chancel to Big Piney.** Meet at Chancel at 8:30 a. m. for overnight hike. If weather bad, will hike to Greasy Creek and back to Chancel, one day only. Road west to Chancel leaves Highway 7 three miles north of Lurton and five miles south of Cowell.	Dick Murray, leader, 2006 Austin Dr., Fayetteville, Ark. 72701 ph. 442-8995 Harold Hedges, assistant

INDIAN NATIONS CHAPTER
Tulsa

Feb.		**One day FLOAT on ILLINOIS RIVER—Fiddlers Bend to Chewy Bridge** when snow is on ground. A spur of moment trip, dependent on snow at right time. If interested write: Mel Smith, 305 N. E. Morningside, Bartlesville, Okla. 74003	Mel Smith, 305 N. E. Morningside, Bartlesville, Okla. 74003
Apr.	18-19	**CAMPOUT at LAKE WEDINGTON, ARK. FLOAT UPPER SECTION ILLINOIS RIVER.**	Glen Ramsay, 1725 S. Yorktown, Tulsa 74104 ph. 936-1546

PULASKI CHAPTER
Little Rock

Mar.	7-8	**Exploratory trip down SULPHUR CREEK CANYON, Searcy County,** to pinpoint two caves in area. Steep canyon with large boulders. Will be relatively rough hike. Assemble at Eula on Richland Creek. From there 4-wheel drives will transport people and gear past Wasson School to mouth of Sulphur. Those who want to remain overnight and explore more of Richland area on Sunday will camp here.	John Heuston ph. 758-0814
Apr.	11-12	**CANOE TRIP, BIG PINEY CREEK—camp at Long Pool campground.** Assemble 8 a.m. both mornings for floats with empty canoes Treat to Long Pool and Long Pool to Double Bridge.	Harold Hedges Ponca, Ark. 72670 ph. 428-5445 John Heuston
May 3, Sun.		**SPRING BUS TOUR—The Pulaski Chapter's annual spring wildflower tour**	Everett Bowman FR 2-2664 Walls Trimble MO 6-7440

DELTA CHAPTER
Pine Bluff

Mar.	1	**HIKE to HOLE-IN-ROCK and HORSESHOE FALLS**	Leader: Jim Rees, Harrison. Local contact: Tom Parsons, ph. 534-3400 or 535-2775
Mar.	14-15	**BACKPACK TRIP to COSSATOT RIVER**	Leader: Wellborn Jack, Jr., Shreveport. Local contact: Tom Parsons, ph. 535-3400 or 535-2775
Mar.	29	**FLOAT on SALINE RIVER**	Leader: Dave Robertson, ph. 536-0641. Local contact: Brenda Robertson, ph. 536-0641

Apr.	5	**DELTA BOOTH at the PINE BLUFF SPORTARAMA**	
Apr.	11-12	**FLOAT on MULBERRY RIVER**	Leader: Harold Hedges, Ponca. Local contact: Tom Parsons, ph. 534-3400 or 535-2775
May	3	**HIKE on DEVIL'S FORK**	Leader: Tom Parsons, ph. 534-3400 or 535-2775
May	16-17	**FLOAT on BUFFALO RIVER, Ponca to Pruitt**	Leader: Chalmers Davis, Altheimer, ph. 766-8301
May	30-31	**MEMORIAL DAY FLOAT by OWWC**	

OUACHITA CHAPTER
Arkadelphia

Leader: Lee Kuyper, Box 256, Ouachita University, Arkadelphia 71923

Leader: Joe Nix, Chemistry Department, Ouachita University, Arkadelphia 71923. ph CH 6-6534

Feb.	21	**HIKE BRADY MOUNTAIN WILDERNESS** area on southern shore of Lake Ouachita
Mar.	14-15	**FLOAT UPPER CADDO RIVER**, Caddo Gap to Glenwood and Glenwood to Amity

BAYOU CHAPTER
Shreveport

Leader: George Armstrong, 311 E. 76, Shreveport 71106. ph. 865-8302

Leader: Wellborn Jack, Jr.

Leader: John Axford, 2915 Bobbie St., Bossier City, La. 71010. ph. res. 746-5020, bus. 423-4171

Leader: Lloyd Naylor

Leader: Russ Bruner

Leader: Wellborn Jack, Jr.

Leader: Lloyd Naylor

Feb.	21-22	**HIKE TO COSSATOT FALLS**—Mainly a day hike. Those wanting to camp, may.
Feb.	28	**TRAINING FLOAT**— Meet at bayou on Kingshighway at 1:00 Saturday p.m. for canoe clinic and practice session.
Mar.	8	**DORCHEAT BAYOU**— Day float down one of Louisiana's beautiful streams. Meet at Dixie Inn at 8:00 a.m.
Mar.	21-22	**LITTLE MISSOURI RIVER—Camp at Albert Pike.** White water canoe clinic will be main activity; chalk talk and practice will start at 10:00 a.m. Saturday. First Annual Bayou Chapter White Water Canoe Slalom will start at 2 p.m. Saturday. For Day Hikers, a number of interesting hikes are close to the camp.
Mar.	29	**KISATCHIE NATIONAL FOREST**—Day hike
Apr.	5	**DOGWOOD TRAIL DAY HIKE—Dogwood Trail area near Plain Dealing, La.**
Apr.	11-12	**COSSATOT RIVER—Two day float from Hiway 4 bridge to Ladd Bridge.**
May	2-3	**BEAR MOUNTAIN AREA—Near Lake Ouachita in Arkansas.** Plan several day hikes on some of Forest Service trails. Family camping near lake.
May	9-10	**CADDO RIVER—Norman to Amity.** A trip to be co-ordinated with Joe Nix and the Ouachita (Arkadelphia) Chapter
May	23-24	**LITTLE MISSOURI—below dam at Narrows;** a re-visit to scene of Bayou Chapter disaster of 1969. The water is fast and the trip can be floated in three hours with a turnover or two. Family camping on Lake Greeson.

THE OZARK SOCIETY

P.O. Box 38 **Fayetteville, Ark. 72701**

Dues are for the calendar year. They are: regular (and family), $5; contributing, $10; sustaining, $25; life, $100; student, $1.

Please check: new member____; renewal____. Date_____

Name_____/ or "and family" _____
(If Mr. and Mrs., please specify)

City _____ State _____ Zip No. _____

Those who wish to renew membership for 1970, or who wish to become members, are requested to mail their dues promptly. This assures an up to date mailing list and prompt receipt of Bulletins.