

STEVART ST organtonn uv 26303 Highlands

Services, Inc., PO Box 1121, Elkins; postmasters address forms 3579 PO Box 1121 Elkins, W.Va. 26241.

September, 1974

is North Carolina and Virginia we. St. George is also re Dem Project be approved.

(photo by R.G. Burrell)

lew River Battle Nearing

Prem American Rivers Conse Summer 1974

be pitch of the struggle over the fate of the New or has heightened considerably in recent weeks. May 26, the Senate peased, by a 48-19 margin, a that would place a 70-mile stretch of the river in the Carolin and Virginia in the study entegory of Wild and Scenic Rivers Act. Then, on June 14, in a re that angered many, the Federal Power amission licemed the Blue Ridge Project, a appd-storage dam system that would destroy see 44 miles of the reach the Senate had designated a study. However, the FPC postponed the effective of the license until January 2, 1975, thereby lag the stage for an intense contest in the House of resentatives between environmentalists and the ky industry.

In the Senate the effort for protection of the river and the nearly 3000 persons who would be displayed y the deam was led by the venerable "Senator Sam" rvia. In the House the fight is being forwarded by representatives Boy Taylor, James Martin and Timer "Vinegar Bend" Mitzell, all of North Carolina. Proposents of the dam are chiefly the Virginia dalagation (the dams themselves and much of the reservoirs are in Virginia as is the company that wants to build the project) and henchmen of the power industry such as Rap. Craig Hosmer of California.

At the time of this writing, H.R. 11120, which would enignate for study the same strotch as that puroved by the Senate, has been passed by the abcommittee on National Parks and Recreation of the House Interior Committee. Pierce fighting is spected in the full committee and on the floor of the

The Blue Ridge Project is proposed by the oppolechies Power Company, a subsidiary of the sait American Electric Power Company, the folks the brought you the full page newspaper ade orging to revisiting of the western plates for strip mised

coal. AEP has mobilized the entire electric utility industry, not just because they want to dam the New River for the production of peak load power, but because they see the use of the Wild and Scenic Rivers Act to block FPC licensing as a most dangerous

Because of the level of effort of the power industry, it is essential that river conservationists from throughout the country become involved in this issue.

Mail must begin pouring into the office of every member of the House of Representatives urging support of H.R. 11120. Conservation-minded support of H.R. 11120. Conservation-minded Congressman should be educated to the beautiful pastoral landscape, the fantastic botanical diversity, the top-notch smallmouth bass and trout fishery, the geological features, and the historic values that are at stake. They should also be told that a wild and scenic river atudy in needed because the Federal Power Commission's review of these factors was determined to be inadequate by agencies like the Environmental Protection Agency and the Interior Department. Department.

Assumes Reing

Joe Rieffenberger has been selected by the Conservancy Board of Directors to complete the unexpired term of David P. Elkinston as President of the Conservancy. Rieffenberger was the unanimous choice of the Board at the Summer Board Meeting, July 21, to replace Elkinton who has departed for six months of study in Wales.

Rieffenberger is familiar to veteran Conservancy.

months of study in Wales.

Rieffenberger is familiar to veteran Conservancy members for his active role in the effort to proserve Shavers Fork. Joe is employed by the Department of Natural Resources, and he has played a prominent role in the DNR study of black bear habits on the Shavers Fork watershed.

Joe will serve as President until January, 1975.

Weekend Review To Feature Shavers Fork

Corridor H, Showshoe, Shavers Fork - these are familiar names to Conservancy members and readers of the VOICE over the past year. On October 18-20 anyone with more than a passing interest in these vital environmental issues will have the opportunity to see the problems first-hand. The 10th annual Highlands Weekend Review, sponsored by the Conservancy, will focus on the Shavers Fork area. Guided tours will be led into Snowshoe and Corridor H for a close-up look at these major developments along Shavers Fork. Another tour will provide insight into the unique beauty of Shavers Fork during a hike from Bemis to the High Falls of Cheat. Tours will also investigate the virgin red spruce forest on Gaudineer Knob, the wilderness of Otter Creek, the mysterious Sinks of Gandy and the rich heritage of historical Randolph County.

Headquarters for the Weekend Review will be the Department of Natural Resources Operations Center near Elkins. Registration for the weekend's activities will begin at 5:00 P.M. at the DNR center on Friday evening. October 18. Films, slides and discussion sessions will highlight the Friday evening program for early arrivals.

On Saturday morning, October 19, the tours will begin leaving the DNR Center promptly at 8:15 A.M. Return of the tours will be celebrated with a chicken barbecue, beginning at 6:00 P.M., at the DNR Center. (See coupon for advance reservation for barbecue.) The Saturday evening program will begin at 7:30 P.M. Conservancy Rivers Chairman Bob Burrell will medicate a possel discussion titled "Recreational

moderate a panel discussion titled "Recreational Development and Land-Use Planning." Panel members will consist of Dr. Thomas Brigham, President of the Snowshoe Corporation, Mrs. Virginia Nugent, Past National Chairman, Land-Use Task Force, League of Women Voters, and William D. Brundage, Director-At-Large, West Virginia Highlands Conservancy.

Sunday, October 20, a meeting of the Conservancy Board of Directors will bring the weekend to a close.

The meeting will begin promptly at 9:30 A.M.

Members of the Conservancy will receive a brochure sometime in September outlining the weekend's activities. Nonmembers may obtain a brochure by writing to Joe Rieffenberger, Rt. 1, Box 253, Elkins, WV 26241.

Conservative Congreeman should be reminded of the property rights of the hundreds of families that will be forced to leave their homes. Many of these families have a lineage that goes back for generations in this valley. Those who are farmers will not just lose their homes, but also their way of life, as replacement

their homes, but also their way of life, as replacement farms are nearly impossible to find. The millions of dollars worth of agricultural goods produced in the valley each year will be lost to our nation's economy. Finally, those concerned about energy should know that pumped-storage projects such as this are inefficient, providing only two units of energy for every three pumped into them. There are several new, more acceptable technologies, such as fuel cells and flywheels on the horizon. But most important, utilities need to look at new pricing structures that would help even out the demand for power, thereby reducing the need for peak power facilities, and making our energy utilitization more efficient.

The buttle for the New (actually one of the oldest rivers on the earth) is one of the key river conservation issues of recent years. If you only write your Congressmen once or twice a year, make this one of year letters: write new in favor of H.R. 11120.



by Ron Hardway

Hikers on the Middle Fork of Williams River trail (108) have become increasingly alarmed by signs of heavy motor vehicle traffic on the trail. Evidence of the traffic, i.e., ruts, mudholes and litter, is most prevalent on the upper part of the trail between North Branch and Hell-for-Certain Branch. But throughout the length of the trail hikers have been noticing mysterious numbered stakes, bits of blue flagging either tied to trees or simply strewn about the trail, and ominous pieces of recently discarded equipment such as heavy electrical wiring, batteries, and unidentified fragments of metal and glass.

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At first hikers attributed the ruts and discarded junk to Trout Unlimited. TU is conducting a stream study of the Middle Fork to determine the source of high acid content in the stream and the feasibility of introducing a trout population (see The Voice, JUN 1973). But it was unlike TU to litter in an area where they were working and to ride roughshod over a trail which is supposed to be closed to motor vehicles. A quick check with Don Brannon, President of the Kanawha Chapter of Tu, brought a firm denial that TU was the guilty party. Brannon said that TU used only portable equipment belonging to the DNR and that everything they took in went back out again. He also said that TU used no markers of any sort on Middle Fork, and he was equally concerned and mystified by the stakes and ribbon cluttering the Middle Fork Trail.

Next the Forest Service at Richwood was consulted. They too were confused initially, but after checking out descriptions of the stakes they came up with an explaination.

According to Gauley District Ranger M.L. McManigle the stakes were placed along Middle Fork by the Teledyne Exploration Company, a Texas-based oil and gas exploration firm. Last spring the Forest Service gave Teledyne permission to use a two ton truck carrying a seismic vibrator on the Middle Fork Trail to test for oil and gas deposits. The Forest Service assumes that the bits and piece of equipment found along the trail were discarded by Teledyne.

McManigle further revealed that the poor condition of the Middle Fork Trail near its headwaters was the responsibility of the Forest Service itself. Last spring they employed a grader to divert water flow from the trail.

The blue flagging remains a mystery. Someone has gone to a tremendous amount of trouble to mark something, but no one knows what. The flagging seemed to be unconnected with Teledyne's stakes since the two were seldom found near each other.

Thus, excepting the ribbon, the great Middle Fork Mysteries have been explained. But their explanation does not relieve the apprehension lovers of the Cranberry Back Country share for West Virginia's largest and most unspoiled wilderness.

The Middle Fork Mystery

The Case of the Ever-present Road

In fact, solutions to the mysteries have pointed out the dire problems facing the entire CBC, but Middle Fork in particular. Since the Back Country was deleted from the recently passed Senate Eastern Wilderness Bill and placed in the sinister "Study Area" category, we think it is time to review the Cranberry situation.

Minerals under the CBC are privately owned. The Forest Service had no authority to prevent Teledyne from taking its seismic readings on Middle Fork just as it has no authority to prevent coal companies from taking core samples. No one has been informed of the results of Teledyne's tests, but a drilling company has struck gas on the western end of the CBS near Read Oak Knob. That one small success is enough to arouse severe disquiet among wilderness support-

Despite their claims extractive industries are not environmentalists, especially in West Virginia. Teledyne could not even drive its truck along 108 without discarding an incredible array of trash in its wake. Anyone who has fallen for the television commercials showing vast drilling operations existing side-by-side with bird sanctuaries in blissful harmony should visit the drilling site on Red Oak Knob. Even a cursory glance would reinforce the belief that television is a fanciful world bearing no relation to the harsh realities of life beyond the tube.

The Forest Service has consistently maintained that the Cranberry Back Country cannot be preserved under the National Wilderness Preservation System because there are roads within the CBC. No credence has been given to counterclaims that these roads exist solely through the diligence of the Forest Service.

The problem of privately owned minerals in the CBC could be eliminated with the purchase of these minerals by the Federal government. But it may be too late for such action. The reidiculously inflated prices of energy resources will make coal, oil and gas reserves in the CBC, however uncertain in quantity and quality, much more attractive to their owners. Despite the threat of mineral exploitation of the CBC the Federal government is making no effort to buy them. Instead it is squandering millions of taxpayers' dollars on such useless and unsound projects as Lagle Lake and the Highland Scenic Highway.

The problem of "Roads" in the CBC could be solved even easier than the mineral problem, and at no cost to anyone. All that is needed is for the Forest Service and the Department of Natural Resources to leave the "roads" alone and keep their vehicles off them. If left-to nature the "road" on the Middle Fork would be gone in year's time. Consider the following natural events and subsequent Forest Service action:

in year's time. Consider the following natural events and subsequent Forest Service action:

(1) Last summer a landslide near Little Beechy Run obliterated a section of 108 under tons of mud, rocks and trees. The Forest Service promptly had a bulldozer clear the slide to again permit motor vehicle traffic.

(2) Last winter and spring heavy rainfalls turned the path of 108 between North Branch and Coal Run into a stream. The forest Service promptly put to work a grader to divert the water, smooth out the trail and reopen it to motor vehicle traffic.

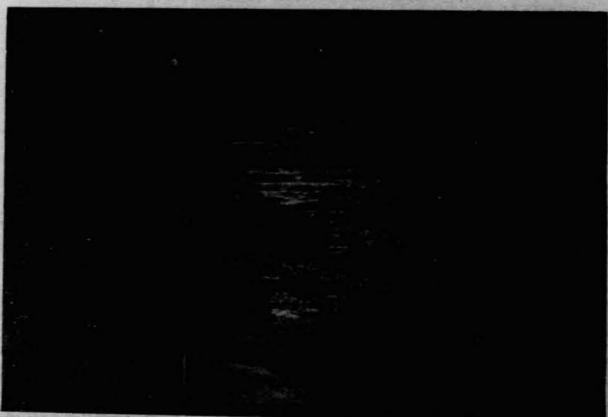
(3) Another heavy rain this summer produced a flash flood on Little Beech Run. Tons of river rocks were washed over the concrete bridge the Forest Service had built across Little Beechy several years ago. At the end of July the Forest Service had not yet removed these rocks, but if past behavior is any indication of future action the rocks probably have already been shoved off the bridge into the stream.

Thus it is obvious that "roads" in the CBC exist due to efforts by the Forest Service to insure their existence. Had 108 been truly closed, as it would have been had the landslide near Little Beechy and the washout at North Branch been left that way, Teledyne may have given second thoughts to trying to take seismic readings on Middle Fork. It costs a lot of money these days to build a road. Ask Jennings Randolph about that.

Several years ago the Conservancy poured hundreds of man-hours into the preparation of an iron-clad case for a Cranberry Back Country Wilderness Area. Hardly a month goes by that some aspect of that case is not eroded by the Forest Service or private industry. Congress has sat on its duff and let the CBC slit away from them and the American public.

The bitter part of it ail is that the degraduation of the Cranberry Back Country has not gone unnoticed by proponents of wilderness designation for the area. Every example of deterioration brought about by man's lunacy in the CBC, some legal and some not, has been brought to the attention of either Congress or the Forest Service, or both. Yet nothing is done.

It's comparable to the efforts of a local religious persuader who har angued and cajoled one of the more heathen of the tribe with every argument he could concoct in an attempt to covert the heathen to The Truth. After nearly two hours of preaching the persuader concluded, "What do you say to that, brother?" The heathen looked up from the crossword puzzle on which he had been working, gazed blankly at the persuader, and said, "Huh?"



Middle Fork of Williams River in the heart of the Cranberry Back Country: site of future gas and oil field?

(photo by R. Hardway)



This month we are overlooking the external economic forces that play a large role in deciding the destiny of West Virginia. It is not news to anyone that destiny of West Virginia. It is not news to anyone that one of Appalachia's most depressing problems is the lack of local capitol for economic advancement. It would be nice to have new, clean industries, but there is a sad lack of necessary or to initiate such ventures. Richwood would like to see a Highlands Scenic Highway bring people to their door, but has no local money to provide decent motels and other attractions that can accommodate today's well-travelled tourists. velled tourists.

Except for agriculture, Appalachia's industries are mainly exploitative ones, timber and coal, the are mainly exploitative ones, timber and coal, the removal of which has been historically both environmentally destructive and socially degrading. To make matters worse, these key natural resources are seldom owned by resident people or corporations, but instead by absentee owners uninformed and uninterested in local problems. The natural wealth is removed at the expense of the local economy and the capitol gained leaves the area through a steady process of exsanguination. All shots are called by the out-of-state corporations leaving Appalachia little better off than a colonial fieldom and its inhabitants little more than serfs

A shining example of such an external factor that daily influences the destiny of an important part of the highlands is J. Peter Grace, wealthy investor and New York-based capitalist. Early this year in an effort to check out a rumor that the W.R. Grace Corporation controlled the Mower Lumber Company and the thousands of acres in the Shavers Fork watershed, a letter of inquiry was sent to the respective corporation. Instead of a reply, a telephone call from the local Mower manager, Charlie telephone call from the local Mower manager, Charlie Bryant, was received. Mr. Bryant stated that he didn't know where I go my information, but that I was totally wrong and that W.R. Grace Corporation had nothing to do with Mower. I then asked if that was so, why did Mr. Bryant feel it necessary to call me, and why didn't I simply receive a letter from the corporation stating as much? In a follow-up letter to the corporation, I replied that their tactics raised more questions than they answered. A written reply repeated what I had been told by Mr. Bryant. Further investigation revealed that it was J. Peter

Further investigation revealed that it was J. Peter Grace himself and a group of fellow investors, outside the parent corporation name, who owned all of the land in question. This took at least three months of letters and could easily have been answered by either Mr. Bryant or the company following my first letter. We have no quarrel with Mr. Bryant. He is simply doing what he is told. If he didn't he would be canned and replaced by someone who did. Mr. Bryant is

personally opposed to strip mining on Shavers Fork, but has to carry out the wishes of the exploiters for whom he is employed. And this is the tragedy that is repeated over and over again in countless parts of

Appalachia.

J.Peter Grace and his fellow co-investors are apparently only interested in extracting each dollar possible from their investment with as little regard for regional social, cultural and economic values as possible. It is they who decide to lease Shavers land to the strippers, to exercise as little control as possible in timbering operations, and to completely desecrate the historic site of Fort Milroy. It is they who fail to appreciate the local significance of this Civil War area. It is they who callously disregard the great innate scenic and wildlife values of Shavers Fork. Since anglers and other sportsmen do not produce revenue to the J. Peter Grace's, such folk are of little consequence.

It is very difficult if not possible to sort out the many intricate inter-relationships among all of the different companies involved in the rape of West Virginia's prime river. Mower leases coal nights to Company A who markets the coal to Company B which is an export firm with contract commitments engineered by imminent politicians to Japan. Often, many of these companies are only subsidiaries of one parent firm. In an effort to determine what, if any, financial backing the Snowshoe project had from J.Peter Grace, a question concerning Grace's financial role was put to Snowshoe entrepreneur Dr. Thomas Brigham. The question evinced the incredible reply that he, Brigham, didn't know. Not being a businessman, I found not knowing whom one's investors and backers are to be rather mind bending. On the other hand, the whole operation might be much larger than I fathomed it. But I digress.

In other areas of the state only the name of J. Peter Grace is changed to something like Continental Oil, Western Maryland Railway, or the Allegheny Power System, but the details of non-resident economic control over local destiny remains the same. Such companies want their cake and eat it too. As an example, several years ago the Allegheny System testified in opposition to the Rowlesburg project for technical reasons. Although the Allegheny System wants to greatly alter the face of Tucker County with the Davis Power Project, it refused to cooperate with those Tucker Countians opposing the Rowlesburg Dam by not sending them requested data used by the system in their opposition testimony.

Where does such a kind of economic control with attendant neglect of local values lead? The W.R. Grace Corporation (of which J. Peter Grace is Chairman of the Board) got a taste of the predictable results earlier this year from some of their similar investments and holding in Peru. Such holdings were nationalized by the Peruvian government, presumble because of policies similar to ones used here in West Virginia.

We might also see where we are heading. National economic pundits are somewhat pleased that the inflationary cost of gasoline following the oil crisis has been partially offset by the millions of dollars currently being invested in the United States by overrich Arab oil barons. Something to do with keeping the balance of payments in the black, I'm told. At any rate, it will be extremely interesting when Americans at large learn how it feels to be treated like an Appalachian since those investments will be managed for profit to the investor rather than in the interest of America, and by people whose knowledge of America is even less than that of J. Peter Grace's knowledge about West Virginia.

Guest "It Is Past the Time For Saving Rivers" Editoria [The Charleston Gazette, Aug. 19, 1974]

The House interior Committee is expected to take up Wednesday (Aug. 21) the bill that would place New River under consideration for inclusion in the Wild and Scenic Rivers Act.

If the bill is ultimately passed - and there appears a good chance that the committee will send it out to the floor-it would delay the building of Appalachian Power Company's Blue Ridge Power Project for at least two years during the study period.

What the full House will do with the bill is anybody's guess, and whatever it does probably won't take place until after Sept. 11 when Congress reconvenes from its late-summer recess.

Chances of the bill's passage took a turn for the worse last week after the powerful AFL-CIO labor union joined with Appalachian in efforts to defeat the measure.

The AFL-CIO's interest, of course, is that the massive \$340 million Blue Ridge Project will provide jobs during the

construction periods, and to the AFL-CIO jobs are what it's all about.

The other side of the coin is that New River is an ancient river, boasts a rich history of exploration and travel, and is prized for its recreational assets. It is already dammed in several places, including at Bluestone and Hawks Nest in West Virginia, and the belief here is that enough is enough.

This mighty river predates the ice age, geologists point out, because it still flows northward, never having been stopped by ice. It is certainly one of the oldest rivers on the North American continent.

Another dam on the New River. particularly one as large as the proposed Blue Ridge Project, will further alter the natural flow of this magnificent waterway and make it just a little more like all the other rivers that have been harnessed and tamed and despoiled by dams and

It is true that the Blue Ridge twin dams

would not alter in any significant respect the visual impact of New River as it twists, turns, and roars through the gorge area in West Virginia, but this is a provincial view.

Our sympathy is with the people of Virginia and North Carolina who would be uprotted from their homes by the building of Blue Ridge, and with the river itself.

As Martin Heuvelmans pointed out so ably in his book, The River Killers, the history of this country is replete with irreparably damaging attempts by man to subvert natural forces like a river to his own will. We submit it is past time to concentrate our efforts on preserving our rivers in what remains of their natural state.

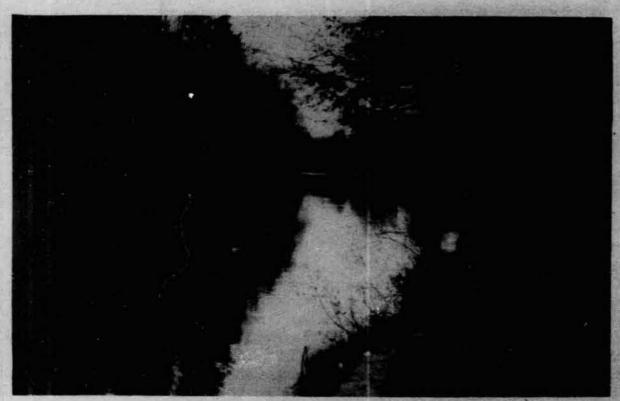
We urge the remainder of our congressmen to join with Rep. Ken Heckler in backing the wild and scenic river study for New River - our big water from the south that has become symbolic of the battle between environmentalists and big business interests.



Northern Canaan Valey looking east to Cabin Mountain. All of the lowland visible would be flooded by Allegheny's proposed 7200 acre lake.



Big Cove in northern Canaan Valley is the home of an arborial wanderer from the north woods, the balsam fir. Balsam firs are found farther south in only one isolated spot. Big Cove and its balsam firs will be completely inundated by the Davis Power Project.



The Blackwater River, shown here as it flows out of Canaan Valley, is a stream which would be at home in Maine or Ontario. The water is truly blackish in appearance due to natural leaching from spruce which grows along its banks and throughout Canaan Valley. The Blackwater is one of West Virginia's finest trout streams, but this unique stream would become Blackwater Lake if Allegheny Power System has its way.

Text by

Photographs by Helen M

No environmental threat facing the West Virginia highlan

than the Davis Power Project. On the off-chance that there summary of the situation is here provided.

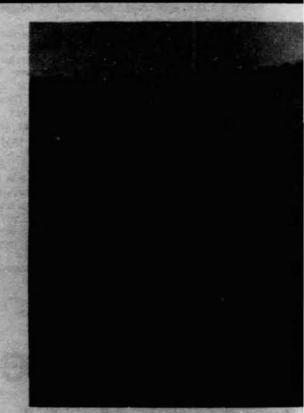
The Davis Power Project is a plan to create a 7200 acre la more electricity to the east coast. The project would be on t stored in a reservoir, and electricity will be produced by electricity is to be produced at any given time. The releasest the project will be produced at any given time. turbines within the power plant.

The Davis Power Project is the brainstorm of the Al companies including West Virginia's own Monongahela Pow Project before the Federal Power Commission for nearly

Project before the Federal Power Commission for nearly Hearings by the FPC began this past April following a natechnical reevaluations of the scheme. Allegheny promptly "experts" by environmentalists, including the Highlands taken by the FPC itself in questioning the Allegheny report The outcome of the hearings has not yet been determined any power development within Canaan Valley. The Department of the project were constructed and the project. The FPC and the presiding judge have maill-conceived and that not enough attention has been placed. ill-conceived and that not enough attention has been placed of in Tucker County who once argued bitterly for the prodevelopment and tourist dollars, have been shocked by

anticipation of the proposed lake.

The purpose of this pictorial essay which follows this brief what is at stake in Canaan. The photographs are in answer valley but a lot of damned mud and some woodcocks any



Another feature of the Davis Power Project which is of two reservoirs instead of one. The second reservoir with known as Dobbin Slashings Bog. The reservoir here incredible covering of polytrichium moss on Dobbin S All of this would be drowned by the upper reservoir



Another bog area on the valley floor near Big Cove in under Blackwater Lake.

provoked more bitterness, hard feelings, and misinformation a Conservancy member who has not heard of Davis, a brief

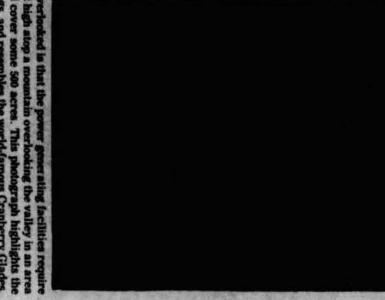
er Canaan Valley, Tucker County, for the purpose of providing mped storage principle. This means simply that water will be ing the water in varying quantities depending on how much r, of course, provides the power for the electricity-generating

y Power System, a Brobdingnagian assembly of electric mpany. APS has had an application to build the Davis Power

le of environmental impact statements, wildlife studies and itself ill-prepared for the intensive grilling foisted upon its vancy. Most surprisingly was the environmental hard-line

partment of Interior has issued a statement in opposition to latural Resources has testified that irreparable harm would wer companies themselves have been forced to rethink the secret of the fact that the Davis Power Project has been alives to the mammoth project originally envisioned. People sking in visions of increased tax revenues, recreational reational land grab now occurring in Canaan Valley in

nary of the Davis Power Project is to show the general public Davis merchant who once said to me, "There's nothin in the







Beavers have long played an important part in maintaining the unique and fragile ecology of Canaan Valley. This photo shows the upper end of a large beaver pond in Canaan. Everything visible in this photo to the foot of the mountains in the distance would be under water.



Wildlife in Canaan Valley is plentiful and varied. High grass, low brush, thick tree clusters and more extensive hardwood groves provide shelter and sustenance to wildlie ranging from bobcats to woodcocks. All of the lowland here would be under Blackwater Lake.



What is in store for Canaan Valley if the Allegheny Power System receives a lice may be divined from studying the existing VEPCO facility near Mt. Storm, on the left of the

Here, then, is Canaan Valley as it exists today. Tomorrow may bring another VEPCO, or it could bring a pricking of consciences to the people who want to turn the valley into another VEPCO.



Acid Precipitation: How Serious a Problem?

Gordon T. Hamrick

The June 1973 issue of the Voice carried an article entitled "The pH Syndrome," dealing with the problem of acid precipitation in the West Virginia Highlands . Shortly after the Voice article appeared in print, the September 1973 issue of Smithsonian, in 'Phenomena, comment and notes," carried an item to the effect that Dr. Albert Krueger, of the University of California, had determined that polluted air was deficient in ions, particularly in negatively-charged

This was followed in short order by the article, "New Ways to Increase Man's Food," appearing in the October 1973 issue of Natural History. This article dealt, in part, with the problem of photorespiration - the release of carbon dioxide by plants caused by changes in light intensity - and the resultant increase in formation of carbonic acid under given conditions.

Now, comes the article, "Acid Rain: A Serious Regional Environmental Problem," appearing in the June 1974 issue of Science. This is followed by an item in "Wildlife Omnibus," in the August-September issue of National Wildlife, dealing with acid rainfall caused by sulfur dioxide.

What all this leads up to is this: in any solution, it is the presence or absence of hyrdrogen ions that determines whether the solution is acid or basic. Therefore, in polluted air, according to Dr. Krueger's findings, we can expect to find a relatively large number of hyrdrogen ions - positively-charged hydrogen ions - which, in the presence of moisture. can and do unite with air pollutants to form acid precipitation. The exact nature of the acid precipitation may vary from hour to hour, depending upon the quantity and nature of air pollutants present at any given time.

The Science article cited deals with an 11-year study of precipitation at Hubbard Brook Experimental Forest, New Hampshire. Briefly, the study shows that water in the atmosphere in equilibrium with existing carbon dioxide has a pH of about 5.7; that much stronger acids have been observed in precipitation, with pH values as low as 2.1; that the major cation is positively-charged hydrogen ions; and that the presence of these acids is presumably related to air pollution.

The Science article goes on to note that date from New York State indicates that present-day precipitation contains about 70 per cent less sulfur than that prior to 1950, and that since the pH of precipitation was not lowered prior to 1950, much of the sulfur then must have existed as un-ionized particulate forms or as ionized forms neutralized by an equivalent amount of bases. Therefore, the change in acidity that occurred after 1950 is probably due to a shift in the predominant form of sulfur in the atmosphere.

Prior to 1950, coal with a high sulfur content was the major fuel in the study area. During the period 1950-1955, natural gas, with a low sulfur content, replaced coal as the major fossil fuel. Natural gas combustion also releases large quantities of oxides of nitrogen which, in the presence of moisture, can combine to form nitric acid.

Too, beginning about 1950, industry erected higher smokes tacks and these were fitted with electrostatic precipitators to remove larger particulate matter. These precipitators effectively removed alkaline substances which formerly neutralized some of the by-products of combustion of fossil fuels. During this time, also, consumption of petroleum products increased tremendously. Thus, changes in fuel consumption, fuel preference, and pollution control techniques (higher smokestacks and particulate precipitators) combined to introduce into the atmostphere considerable quantities of oxides of sulfur and nitrogen (author's note: do the precipitators also help ionize hydrogen?). These oxides are dispersed over a wide area by the combination of high smokestacks and prevailing winds, and, in the presence of moisture, combine to form acid precipitation. A local soot or fly ash problem is thus changed into a regional acid precipitation problem

To apply this briefly to the West Virginia Highlands, we have a mountain range - the Allegheny Front - impeding the flow of west-to-east winds. These winds, flowing unchecked from the eastern foot of the Rockies, have picked up all the airborne garbage along their path and, when striking the Allegheny Front, are forced upward, compressed, and cooled. The moisture in the air currents, being heavier than the air, remains west of the mountain range. In effect, this means that the atmosphere which is presumably polluted and therefore has a deficiency of negatively-charged ions (Krueger's findings) is being further depleted of negative ions as the winds carry the negatively-charged ions across the mountain range. Compression and cooling of air means condensation and the end result is acid

The ecological effects of acid precipitation are as of yet largely unknown but are potentially manifold and extrememly complex. Effects may include changes in the leaching rate of nutrients from plant foliage (see "The Turning of The Leaves," October 1973 Natural History; changes in the leaching rates for soil nutrients; effects on the predator-prey relation-ships; acidification of lakes and streams (see "Middle Fork Project," Spring 1974 Trout); effects on metabolism of organisms; and corrosion of structures (see pictures on page 31 of August-September 1974 National Wildlife.)

The outlook for the future is dim. Assuming that energy demands will continue to rise and assum that fossil fuels will continue to remain abundant and economically desirable, emissions of oxides of sulfur and nitrogen will continue to increase. This will be particularly true if air pollution standards are relaxed to meet energy needs during the so-called "Energy crisis." Increased concentrations of oxides of sulfur and nitrogen mean still more serious and widespread acid precipitation with all that this outcome implies for the function of acceptations both natural and for the function of ecosystems, both natural and man-made.

The Environmental Protection Agency has issued a proposal for air pollution standards which has horrified environmentalists throughout the nation. The Sierra Club has already threatened to take the proposal to court if EPA decides to implement it.

Essentially EPA's proposal would allow states to permit pollution of air if the states decide industrial and economic growth is more important than clean

In revealing the proposal EPA deputy administrator John Quaries said that the proposals would allow unfettered construction of gigantic 1000-megawatt coal-burning power plants, petroleum refineries, oil shale processors and coal-gasification plants among other air polluting installations. The proposal was aimed largely at western states where air is relatively clean, but where vast coal reserves are awaiting strip mining and associated power plants.

Immediately following Quarles statement Sierra Club attorney Bruce Terris said that EPA was obligated to enforce federal air pollution control standards imposed by the 1970 Clean Air Act. The Sierra Club went to court in 1972 over interpretation of the Clean Air Act, and they won their point where air exceeded federal standards of cleanliness no pollution at all should be allowed.

Terris is confident that the courts will reinforce that decision if EPA implements its air pollution.

that decision if EPA implements its air pollution

New Organization To Combat Drillers

An organization has been formed recently to try to prevent abuses of lands and streams by oil and gas drillers. Called Concerned Land and Natural Resources Owners, Inc., the new organization hopes to influence the West Virginia legislature to update ancient laws which allow drillers a free rein in their drilling operations.

The new organization has already gained the support of the West Virginia Farm Bureau. The powerful rural association has issued a policy statement saying, "In a very high percentage of cases in West Virginia ownership of the mineral rights is separated from ownership of the surface land... and in the case of drilling for oil and gas and the operation of oil and gas fields, the owner of the surface is subjected to make a missance and damages. surface is subjected to major nuisance and damages for which, in many cases, he can collect no

Concerned Land and Resources Owners president, Jack A. Shock of Jane Lew, noted that many drilling leases were obtained by large corporations in the 1800's and that landowners are powerless to prevent destructive exploitation of the leases.

WYHC To Explore Legalities Of Eagle Lake

The annual Summer Board Meeting of the Conservancy was highlighted by an authorization to hire an attorney to pursue legal options in blocking in the proposed Eagle Lake project. Eagle Lake is a proposed Forest Service impoundment on Hills Creek, Pocahontas County (See The Voice, June-July

Ellen Snyder reported to the Board that a possible recourse to block the project would be to seek National Landmark status for Hills Creek and its spectacular falls. Snyder, Laurie Cameron, Jerry Kyle, Fred Kyle and Pete Hauer were volunteered to serve as a committee coordinating Eagle Lake options. Hauer was selected as chairman of the

In other business at the Board meeting Charleston Vice-President Nick Lozano reported that the Forest Service had granted permission for the Allegheny Trail to pass through the Monongahela National Forest Lozano said that approval was anticipated for routing the trail through small sections of the routing the trail through small sections of the Jefferson National Forest and the George Washington National Forest.

The nominating committee, responsible for choosing the 1975-76 slate of Conservancy officers, was chosen by the Board. The nominating committee will consist of Bob Burrell, Jerry Kyle, Bobbi Nagy, Ron Hardway and Max Smith. Burrell will chair the

The next Conservancy Board Meeting will be h October 20 at Camp Thornwood near Bartow as concluding activity for the Highlands Week

If the State Department of Highways, Foderal Highway Administrative and Governor Moore want to do the right thing about Corridor H construction, they will admit they made a mistake and stop the highway where it is now.

They should then backtract to Elkins and build the read meth to Farsons, thus sparing further danger to the 54 million Bowden Federal Fish Hatchery, to probably a desen quality treat streams, and to a wilderness area west of Canaan Valley.

There seems to be an obsession in West Virginia for building reads through wild places, as opposed to following perfectly good existing reads. Cerridor H and the Highland Scenic Highway are classic

The logical route for Corridor H to have followed ut of Elkins would have been nor th to Parsons. Then it could have followed U.S. 219 to Davis and W.Va. 25 to its ultimate intersection with U.S. 50 near Romney. From Elkins to Parsons it would have followed a vide valley and gentle grades, except for the run through Backbone Mountain. The Department of Natural Resources, recognizing this fact and the fact that the Elkins to Bowden route posed all kind of environmental problems, once favored the Parsons route. Then, about two years ago, DNR director Sandy Latimer withdrew because the Governor's office wanted it to go that way.

The Bowden route is an environmental disaster. It already has resulted in the killing of 150,000 trout at the Bowden hatchery because construction interfered with the flow and water quality of one of the two springs feeding the hatchery manager believes it is. From Bowden, the highway is scheduled to run to Wymer and then northward through inbroken country toward Canaan Valley and eventually through Grant and Hardy counties to Rt. 50. The section toward Wymer will endanger the second Bowden spring and therefore the hatchery, and the section from Wymer northward twill cross a bost of trough streams and go either through or around Canaan Valley. Most likely it will go to the west of the valley through a rugged wilderness area that should not be violated with a highway.

All this can and should be avoided. There is legal precedent for simply stopping the highway at Bowden. In a 1970 U.S. Supreme Court case (Conservation Society v. Texas) the court ruled it isn't resitate to consider the route of a highway section, as opposed to an environmental study of the entire route.

Once a highway is started in a certain direction, the court pointed out, the options for routing it become extremely limited.

A perfect example is Corridor H, which was started toward Bowden and Wymer without an environmentally, and all the piecemeal environmental statements in the world area? It is to be reby declared to

The Wrong Place Corridor H



The Dry Fork River, another choice trout stream, is also in the path of Corridor H if construction continues beyond Bowden.

(photo by D. Elkinton)

The extension of Corridor H east of Elkins is proving to be the environmental diaster predicted for it. Members are urged to write State and Federal officials to halt further construction along this alignment. It is especially important that letters be directed to.

Mr. Rogers C.B. Morton Secretary, Department of The Interior Interior Building C Street between 18th and 19th N.W. Washington, D.C. 20240

Dr. Lynn A. Greenwalt
Director, U.S. Fish and Wildlife Service
Interior Building
C Street Between 18th and 19th N.W.
Washington, D.C. 20240

Mr. Richard E. Griffith
Director, Northeast Region
U.S. Fish and Wildlife Service
Boston, Mass. 02109



Two environmental publications have been received this month which may be of interest to Conservancy member and associated organizations

The ORV Monitor is a bi-monthly publication of the Environmental Defense Fund ORV, of course, refers to off-road vehicles. Conservancy members who have tried to hike the Otter Creek Trail possess intimate knowledge of the reasons why The ORV Monitor should appeal to Conservancy members.

Briefly the Monitor is a newsletter which leans heavily towards articles documenting ORV destruction of delicate natural areas. It reports on nation-wide attempts to regulate ORV's, and it usually includes an informational bibliography. A year's subscription to ORV Monitor costs \$6.00 and is available from Environmental Defense Fund, 2728 Durant Avenue, Berkeley, CA 94704.

Land Use Planning Reports is another newsletter, this one appearing weekly. It is published by Plus Publications, Inc., and does not appear to be associated with any environmental organization. While LUP Reports will appeal to individuals its subscription price is within reach only of

> WATERSHIP DOWN by Richard Adams MacMillan Company. \$6.95

The heroes of Watership Down are wild rabbits. In fact, all of the major characters are rabbits with the exception of a seagull. Lest this fact deceive the reader into visions of a fairy tale, immersed in cuteness and sentimentality, be assured that Watership Down is in no way a fairy tale. Nor is it in the least whimsical. This is an intensely serious and compelling tale of an attempt at survival. With tremendous imagination and originality, Richard Adams has created an odyssey of nature and man's relationship to it. The animals are given voices with which to tell their tale and a language to describe things only rabbits know about. An adventurous portrayal of escape from annihilation by the hand of man, this book is an effective commentary on humanity, or rather man's inhumanity.

It is inconceivable that any reader of Watership Down could ever again entertain a desire to harm rabbits or any other natural being. In that and in every way, Richard Adams has written a succe sful book.

-Susan Moore

JOIN THE WEST VIRGINIA HIGHLANDS CONSERVANCY

You are mighty poor Americans if your care for the well-being of this country is limited to hoping that that well-being will last out your own generation. No man, here or elsewhere, is entitled to call himself a decent citizen if he does not try to do his part toward seeing that our national policies are shaped for the advantage of our children and our children's children.

-Theodore Roos evelt

☐ \$5.00 Individual regular
☐ \$10.00 Individual associate
□ \$25.00 Individual sustaining
☐ \$20.00 Organizational regular
☐ \$30.00 Organizational associate
☐ \$50.00 Organizational sustaining
NAME:
ADDRESS:
ZIP
Make checks payable to "West Virginia Highlands Conservancy." Mail membership form and dues to:
Carolyn Killoran, Members hip Chairman,

6202 Division Rd., Huntington, WV 25705 organizations. At \$90.00 per year it is hardly in the same class as The ORV Monitor and The Highlands

LUP Reports covers land use planning efforts nation-wide. For example, a recent issue dealt at length on the Federal strip mining bill, Udall's land use bill, pipelines, the Lake Tahoe brouhaha, and brief synopses of what each state is presently doing regarding land use planning.

Periodically LUP Reports makes available to subscribers special publications on land use planning, its problems, solutions and case histories. Apparently these publications are available only to LUP Reports subscribers. Inquire at Plus Publications, Inc. 2814 Pennsylvania Avenue, NW. Washington, DC 20007.

Another item of interest comes from the U.S. Environmental Protection Agency. This is a pocket sized bibliography of environmental books, mostly published within the last two years. A short description of the contents accompanies each listing. An Environmental Bibliography is available for .30 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

CONSERVANCY PUBLICATIONS

A new edition of the Monongahela National Forest trail guide is now available. Users will be pleased to know that the format of the guide has been altered, and it will now fit conveniently in a large pocket or an outside pocket on a pack. The new guide measures 5 3/4" x 9". It cost \$2 and can be ordered from the address below.

1. Otter Creek Trail Guide & Management Plan. 75 cents.

2. Dolly Sods Trail Guide & Management Plan -\$1.25,

3. Cranberry Backcountry Trail Guide & Management Plan - \$1.00, 4. Hiking Guide to the Monongahela National Forest

- \$2.00.

These may be ordered from: Mrs. J.C. Rieffenberger

Route 1, Box 253

Elkins, West Virginia 26241

Copies available at 1-3 discount to stores and clubs. Address inquiries concerning wholesale orders to Bruce Sundquist, 210 College Park Drive, Monroeville, Pennsylvania 15146.

Prices as of January, 1974

CLIP AND MAIL

OUTDOOR CHICKEN BARBECUE

Catered by Elkins Jaycees DNR Center 6:00 P.M. October 19, 1974

Paid Advance Reservations Required

\$2.75 per person if received by Oct. 6: \$3.25 per person after that. DEADLINE: Oct. 15. Highlands Conservancy to:

> Jill Linden Box 292 Elkins, WV 26241

NAME:	Vinterior.		100	7 3
	A SPA			231
ADDRESS:_	ALBILL.	A SHADIE!	12 (2)	P) P)

LOOKY HERE

.. Check this list carefully. Your back yard might be included. If any of these stripping applications filed with the DNR during the first two weeks in August rub you the wrong way, fire off a protest to good of Ira S. Latimer, Jr. Room 322, 1800 Washington R., E., Charleston, WV 25303. Send a copy to Ben Greene, same address, and Arch Moore, Governor's Office, State Capitol, Charleston, WV 25305.

Nicholas County: 1247, Phillips Run Coal Co., 14 acres, Hamilton District.

1248, Bailes Coust. Co., 24 acres, Summersville

1264, Majestic Mining, Inc., 140 acres, Hamilton-Buffalo Districts.

Upshur County:

1249, W.Va. Coals, Inc., 16 acres, Buckhanns District.

1254, Sycamore Industries, 65 acres, Union District.

Randolph County: 1258, Pickens Mining Co., 25 acres, Back Fork of Elk, Middle Fork District.

1263, S.S. Joe Burford, Inc. 99 acres, Shavers Fork Huttons ville District.

Braxten County:

1250, Grafton Coal Co., 54 acres, Otter-Birch Districts.

Barbour County:

1260; McCoy Bros., Inc. 28 acres, Glade District. 1262, Ten A Coal Co. 10 acres. Cove (North) District.

Preston County: 1255, Weter Co., 13 acres, Valley District. 1256, Rockville Mining Co. 125 acres, Pleasant District.

1261, C.J. Langenfelder & Son, 50 acres, Pleasant District.

Taylor County: 1265, Kelley Bros., 30 acres, Court House District Harrison County:

1259, Union Knob Coal Co., 177 acres, Union District.

Lewis County:

1251, Grafton Coal Co., 40 acres, Freemans District.

Fayette County:

1253, Pratt Mining Co., 28 acres, Valley District.

Kanawha County: 1252, Hansford Coal Co., 26 acres, Cabin Creek District.

Boone County:

1257, Westmoreland Coal Co., 100 acres, Washington District.

That's a grand total of 1,064 acres of good west Virginia top sell that's going over the hill.

CONSERVANCY OFFICERS

And Other Stumbling Blocks

President:

Joe Rieffenberger, Rt. 1 Box 252, Elkins, WV 26241

Vice Presidents: Highlands:

Cliff Carpenter, Rt. 2, Box A-22 Webster Springs, WV 26288

Nick Lecane, 1020 Gresscap Ave, Dunbar, WV Pittsburgh: Sayre Rodman, 32 Crystal Dr., Onkmont, PA 15129

Margarget Spahitz, 24 Washington, DC 20007 hitz, 2400 41st St., NW,

Secretary for Membership: Carolyn Killeran, 6202 Division Rd,

Hentington, WV 25705 Committee for Publicity: Stauffer Miller, Box 568 Moorefield WV 26288

ton Hardway, 206 Union St., Webster Springs WV 26268

Chairman for Rivers: Bob Burrell, 1412 Western Ave., Morga WV 26505