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Environmentalists See 'Pretty Good Shot' At Defeating \$200,000 DLM Libel Suit

"Our feeling is we've got a pretty good shot at it," commented Dave Grubb, the attorney of record in the now-famous DLM Coal Corporation's lawsuit against Rick Webb, a 32-year-old Braxton County environmentalist man who drew the attention of the nation when he was sued for \$200,000 for allegedly libeling a coal company.

Grubb's comments came following the mid-January arguments before the W. Va. Supreme Court on the issue of whether or not Upshur County Circuit Judge William Fury's refusal to dismiss the libel suit should be overturned. Judge Fury had originally set the case for trial in Upshur County in October of 1980, fully 15 months after the alleged libelous statements were published in a mid-July issue of an environmental newsletter. Webb and his attorneys — including the prestigious Washington, D. C. law firm of Wilmer and Pickering as well as the U. S. Department of Justice — squared off with Herb Underwood of the Clarksburg-based firm of Steptoe and Johnson.

Grubb, who deferred arguments to the more seasoned professionals, said he believed the justices had already made their decision within just a few days of the hearing. "We have some sources, but it would be a real breach of ethics on our part and theirs," he said. "It could hurt our case if it ever got out" that information about a pending decision had been leaked. He noted the writing of the decision must be assigned to a justice, and he said it would not be unlikely that the decision would not be rendered for five to six months.

Kaufman Dies In Car Wreck

West Virginia lost one of its true environmental leaders with the tragic death Dec. 28, 1980 of Paul Kaufman of Charleston. Paul was known for many accomplishments, including a distinguished career as an attorney and member of the State Senate from 1960-68. But many of us will remember him also for raising important environmental issues before there was an "environmental movement" and before federal and state lawmakers recognized their responsibilities to protect the public from environmental abuses.

In the early 1960's, with Harry Caudill and Gordon Ebersole, he formed an organization called the Congress for Appalachian Development which was dedicated to economic development that would not only provide jobs to the people of Appalachia, but would also leave the

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WVHC Mining Chairman Rick Webb With Board Member Kate Long

Mower Lumber, Enviro Energy Open Mines As Conservancy Ponders New Lawsuits

Continuous mining machines have punched their way 70 feet into the mountainsides along the Shavers Fork of the Cheat River in Randolph County, the first three entries into what the Mower Lumber Company and its mining arm, Enviro Energy, Inc., hope will be billions of dollars worth of high-grade, "compliance steam" coal to fuel the nation's electrical power plants.

The opening of the Glade Run mine is the first of six mines which Mower and Enviro hope to have in operation soon. In addition, two more are in the discussion stages with the U. S. Forest Service which owns the surface beneath which, even now, Mower's mineral rights are on the verge of being relinquished because they've not been mined for half-a-century.

A Decade of Controversy

The mining of the Shavers Fork coal has been a matter of controversy for more than a decade, stalled by environmental groups such as the W. Va. Highlands Conservancy as well as state and federal regulatory agencies ranging from the U. S. Environmental Protection Agency to the W. Va. Department of Natural Resources.

What Mower is after is an estimated \$3 billion in coal reserves that lie beneath the riverbanks and mountainsides surrounding West Virginia's premiere trout stream. There, they hope to open a series of 30 mines to dig

out an estimated 70 million tons of coal lying hidden beneath 28,000 acres of the Monongahela National Forest.



Compliance steam coal suitable for use in electrical power plants in the United States and abroad is being carved out of the mountains lining the Shavers Fork of the Cheat River in Randolph County. The photo above

The issues involved are far-reaching. New York Times reporter Ben Franklin, writing in August of 1980, quoted the east coast head of a major, anti-environmentalist law firm as saying there had been "tremendous losses suffered by private industry and by members of unions who lost their jobs through needless environmental complaints."

It was one of those complaints, DLM said, that prompted a region-wide environmental assessment of the impact of coal mining on a broad section of the Little Kanawha River that reaches from its headwaters neighboring Randolph County all the way to the Burnsville Dam. In fact, just days before the hearing in mid-January, the EPA issued its report on area-wide environmental assessment for the purpose of issuing "new source" permits — and found that the watershed in question was in a "stop category, extremely sensitive and one

in which all applications for a National Pollution Discharge Elimination Permit would have to be negotiated on a case-by-case basis.

DLM temporarily lost its NPDES permit, then regained it in a court battle on technical grounds. In DLM's suit against Webb, the company said the charge that it was hurting trout streams was "totally false and untrue, defamatory and libelous, intentionally and maliciously published, calculated to be damaging to plaintiff's relationship with its employees and key personnel" and was also part of "a conspiracy to harass, intimidate and destroy plaintiff's business by degrading it in the business world and crippling it financially."

At the two-hour hearing which spanned the lunch-hour, former Chief Justice Richard Neely apparently held the limelight in the morning session which was reported by United

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Those mineral rights were reserved half-a-century ago when the Forest Service acquired the surface. Mower

has been engaged in a ten-year-long race for coal development before its

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shows the first of six mines which the Mower Lumber Company and its sister mining firm, Enviro Energy, Inc., hope to open on the state's premiere trout stream.

The frozen curves of the Shavers Fork are visible among the mountaintops and valleys as the pristine stream gambols through the ridges. The farthest vistas in the photo are in Maryland and Pennsylvania.

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'Birds of Prey' Indispensable

By Ron Hardway

American bird watchers and nature enthusiasts use almost exclusively Peterson's field guides with good reasons. The Peterson guides are the best available. But amateur naturalists in America have been missing something because of their unintentional exclusion of other guidebooks. Most notably ignored in

America are foreign publications in the guidebook field, and that is a pity. Not only are the Europeans competent and informed cataloguers of American flora and fauna, but they also produce beautiful publications totally avoiding the photo-painting quality of most American guidebook illustrators. European illustrations are clearly that — illustrations,

almost always done in ink and watercolors with attention to detail seldom captured by their American colleagues except in large-scale works.

I first became aware of these remarkable European publications through a 1967 edition of "A Natural History of Europe" by one Harry Garms which I found in the pages of a discount book catalogue and ordered because I had to have a ten-dollar order and was two dollars short. It was one of the best two-dollar investments I ever made. Opening these pages crammed with minutely detailed watercolor sketches of flowers, mushrooms, snakes, sea creatures and mammals was like inviting Middle Earth into my den. At any moment I expected to turn a page and find a furry-footed creature identified as "Homo tolkien."

Now comes a new publication from Germany with relevance for Americans and a style to match "A Natural History of Europe." "Die Greifvogel der Welt," or "Birds of Prey of the World," with text by Leslie H. Brown and illustrations by Friedhelm Weick (Paul Parey, \$48). Brown and Weick have attempted to catalogue every known subspecies of preying bird, and I am not prepared to say they have failed in their objective. Six hundred and seventy subspecies are described and 574 of them have been illustrated, from 16 subspecies of sparrowhawks to the Andean condor, from the American bald eagle to the Himalayan griffon.

There are two sections to the book. The first part, encyclopedic in style, briefly describes the general characteristics of the different species, then keys the descriptions to the color plates illustrating the species. The color plates with descriptive commentary make up the second part of the book, and this section is what makes the volume worth its price. The birds are illustrated from side view, often including adult males and females of the subspecies as well as immature birds. The effect is highly gratifying and forces one to look with more respect at an order not known for its loveability.

There are some shortcomings. The Golden Eagle, for example, is not identified as a North American resident. All measurements are expressed in metrics, a concept still alien to most Americans. For instance, the red-tailed hawk is recorded as being 53 centimetres long, a fact which made little sense to me until I converted it to 22 inches. However, this is not a failing of the book so much as it is a lack of adjustment on the part of individual readers. The book is bilingual with an English translation of the German text printed adjacent to the text. This is momentarily disconcerting, but soon achieves an attraction in its own right as one realizes that the less-than-glamorous Black vulture takes on a much more noble personality under his German name of "Rabengreir," or the common sparrowhawk becomes an exotic "Buntfalke."

Overall "Birds of Prey of the World" is an enjoyable, informative and lovely reference work, indispensable for the serious ornithologist or the Sunday afternoon birdwatcher. The book is now in bookstores, but can be ordered directly from the publisher, Paul Parey, P.O. Box 236, New York, NY 10016. Prepayment of \$48 is required for individual orders, but institutions will be billed if requested.

Brooks Bird Club

The Brooks Bird Club's mid-winter meeting has been set for Feb. 20-22 at Jackson's Mill in Lewis County, a Friday-Saturday-Sunday evening which will begin with arrival on Friday afternoon, a Friday evening meal and a 7:30 p.m. meeting and program.

Saturday opens with a 9:15 a.m. walking field trip after breakfast, then an 11:15 a.m. BBC executive committee meeting. Following lunch is a four-hour-long "paper session" in which members have been encouraged to discuss their own studies and work related to BBC interests. The Saturday evening banquet will be following with a 7 p.m. slide program.

Sunday's highlight is the 9:30 a.m. BBC general meeting following a morning worship service.

Upcoming events include an April 5 waterfowl field trip to Seneca Lake in Ohio, a May 3 or 10 "Century Day" count by all local groups to be followed in rapid succession by the May 7 to 10 20th annual wildflower pilgrimage to Blackwater Falls State Park, the May 15-17 field trip with the Sutton Seekers at Harpers Ferry, the May 28 to June 6 annual foray at the Greenbrier Youth Camp at Anthony, the all-June 25-mile breed bird surveys and a subsequent June 24-28 Kirtland Warbler Foray to Grayling, Mich.

Blackwater-Canaan Trail

A ten-and-one-half-mile cross-county ski trail has been opened linking two of the Mountain State's prime highland recreation areas, the winter-popular Canaan Valley and the summertime favorite, Blackwater Falls State Park.

The route, which runs along Canaan Mountain, includes one-fourth mile across Blackwater Falls State Park, seven and one-half miles through the wilds of the Monongahela National Forest and two and three-fourths miles in Canaan Valley State Park.

The dedication of the new trail, part of which is shared with the Allegheny Trail, came during a weekend cross-county ski workshop sponsored by the W. Va. Department of Natural Resources. Ski groups which used the trail on its opening day were able to

cover the 10.5-mile route in under four hours. The DNR and the U. S. Forest Service have estimated that average skiing time will vary from three to six hours, compared with a four-hour hiking time. It was noted that the trail is entirely natural, without machine packing of snow, and some sections are either steep, rocky or both.

Three trailheads feature map dispenser boxes and are located at Blackwater Falls State Park, just seven-tenths of a mile from the lodge at the head of the Davis Trail; at Canaan Valley State Park, three-tenths of a mile north of the lodge at the head of the Middle Ridge Trail; and on state highway No. 32, two miles south of Davis at the head of Plantation Trail. The route of the trail is signed with blue diamond markers in both directions.

WVHC Board Meeting

The board meeting of the WVHC was held at Jackson's Mill on Jan. 25, 1981 at 9:30 a.m. The new officers were approved and seated.

Larry George and Stark Biddle reported on the status of the Cranberry wilderness bill. They were directed to proceed in the same manner.

The financial report was given, and a note of thanks was given to Art Foley for his past work as treasurer.

Committee reports included: Highland Scenic Highway — nothing new;

Shavers Fork — we are in court for injunction to prevent mining. Bard Montgomery is serving as chairman;

Rivers — the president was authorized to have a "friend of the court" brief filed on behalf of Rick Webb. The Conservancy also gave Rick their support;

Canaan — newsletter will be out soon and will push the refuge idea, not mentioning the power project;

Scenic areas — a discussion was held;

Membership committee — Linda

Elkinton was named membership secretary and the membership address will be changed at a later date.

Larry George moved that the Conservancy make Patrick McGinley an honorary life member. He represented the WVHC many times when a lawyer's service was needed at no cost to the Conservancy. He has spent many hours and much money in the courts on our behalf. This was done by unanimous vote.

The spring board of directors meeting will be tentatively held April 12 at 9 a.m. at the Department of Natural Resources headquarters in Elkins.

A fall review weekend is being contemplated for the September meeting, a meeting for which Judy and Skip Deegan are attempting to secure Camp Anthony.

On Sunday, Feb. 1, 1981, Rick Webb will appear on "Sunday Morning" with Charles Kuralt on CBS.

The meeting was adjourned at 2 p.m.

—submitted by Lois Rosier, secretary

Kaufman Dies in Car Wreck

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"profits" and management in the mountains as well. Among other schemes, Paul and CAD advocated publicly-owned utilities based on the model used in the states of Oregon and Washington.

Soon after his election to the State Senate, Paul became a leading advocate of legislation establishing meaningful permit and enforcement programs to control water pollution, air pollution and strip-mining excesses. Later in 1968, he ran as a candidate for Governor in the Democratic primary, losing to James Sprouse. Many still remember that Paul's major theme was the need to control strip-mining, which at that time was ravaging the state's land while the state Department of Natural Resources remained relatively impotent, suffering from weak laws and low budgets. For a candidate for governor to garner a significant number of votes while advocating strip-mining controls was as unusual then as it would be today. Even though he lost, many people credit his campaign with providing a significant impetus for the upgrading of the strip-mining laws that occurred soon thereafter.

In 1969, Paul founded and became the first executive director of the Appalachian Research and Defense Fund, Inc., a Nader-like public interest law firm that specialized in environmental and consumer issues. Through his efforts and those of the staff he assembled (some of whom went on to distinguish themselves as public-interest oriented leaders), a number of important cases were won because of his commitment to the rights of Appalachian people to live their lives free from the threats of environmental destruction and abuse.

When he left "Appalred" to return to private law practice, he took with him a young associate, Ray Ratliff, and the firm of Kaufman and Ratliff quickly became the state's leading environmental law firm. Appalred had represented some of the conservationists fighting to save the Canaan Valley from being flooded to create a "peaking power" hydroelectric project. In addition to carrying on that effort, Kaufman and Ratliff also represented groups such as the West Virginia Highlands Conservancy in its struggle to save the Cranberry Backcountry from mining at the very time it was being considered for inclusion in the National Wilderness Preservation

System. Although Ratliff was generally the one seen at hearings, those closely involved always were aware of the important part Paul played in planning the strategy, so vital to a successful legal struggle. His wisdom and counsel were sought frequently because he combined a seasoned practical view of what was possible politically with a never-wavering view of what was right environmentally and ethically.

I particularly remember the satisfaction he expressed when he and Ray had just won the largest settlement ever awarded to a group of chemical workers who had suffered long-term exposure to toxic air pollutants. Just as with many others of his cases, he took his major reward from knowing that he had established a precedent that would make it easier for others to win similar benefits. Most of these beneficiaries he would never meet personally, but their welfare was still his concern.

Late in the 1970's, it was Paul Kaufman who conceived the vision of a wide-spread coalition of civic, labor, environmental and community groups joining together to protect the Appalachian land from irresponsible and exploitive forces. This dream became the First Appalachian Land Festival, a gathering in 1978 that included activists, educators, labor representatives, governmental officials — virtually a microcosm of the Appalachian population. Seldom if ever has such a diverse group been assembled around common goals. That it happened at all was directly attributable to the dream that Paul Kaufman had and to his organizational ability which brought it to reality. Although he was seriously ill in October of 1980 and could not attend the Second Appalachian Land Festival, the participants were still deeply aware of his presence and support.

There were many other achievements for which Paul Kaufman will be remembered, and some of them have been mentioned in other recent tributes. But perhaps Paul's greatest legacy will be the continuing work of the many people who he inspired to share his deep commitment for social and environmental progress and to whom he served as a living model of the difference in the world that one person can make.

— Dave Elkinton



Lancing north toward the newly-opened mine at Glade Run (see photo, front page) is an extension of the Gaudineer Road which connects the Mower-Enviro mining sites with U. S. 250 and the coal washing and loading facilities at Cheat Bridge.

Scenic Trails Association

A close-up look at the proposed Allegheny Trail between Durbin and Cass in Pocahontas County will be offered during the 1981 annual conference of the West Virginia Scenic Trails Association. The conference has been tentatively scheduled for the weekend of April 3, 4 and 5 at the Arboreale Community Center in Pocahontas County near Green Bank.

A newsletter published by the WVSTA noted that when the Durbin to Cass link-up is completed — target date is early 1982 — the Allegheny Trail will extend unbroken from Blackwater Falls State Park in Tucker County to Interstate 64 near White Sulphur Springs in Greenbrier County.

The three-hour morning session of the conference opens at 9 a.m. with a workshop on cardio-pulmonary resuscitation and other first-aid techniques to be taught by Bob Urban of Elkins, the director of training for the Randolph County Emergency Squad. Noontime lunch will be followed at 1 p.m. by a car and hiking tour of the proposed Durbin-to-Cass segment of the Allegheny Trail. After dinner, a trail-building workshop will be conducted by Frank Pelurie of the W. Va. Department of Natural Resources. Sunday afternoon activities will include a hike through the Shavers Mountain area of the Allegheny Trail.

The Elkins Chapter of the WVSTA has set a 1981 goal of developing a preliminary hiking guide for the Blackwater to Cass area of the trail. In addition, a slide show has been assembled and will be available to interested groups. A spokesman for the Elkins Chapter noted that with 70

miles of the trail now open in the Elkins area, trail maintenance has become an important effort the members. The first work-hikes for 1981 are expected to be geared toward improving and measuring the trail, beginning at Blackwater and working southward toward Durbin.

National Survey

One of the oldest and most comprehensive continuing surveys of Americans who participate in fishing, hunting and other pastimes involving fish and wildlife will start again in January when the U. S. Fish and Wildlife Service begins its 1980 "National Survey of Fishing, Hunting and Wildlife-Association Recreation."

The survey has been conducted every five years since 1955 by the Fish and Wildlife Service as a way to gauge American's participation in hunting and fishing. Survey results provide federal and state planners with information useful in the management of fish and wildlife resources and in providing adequate recreational opportunities for the public, according to David Klinger of the Fish and Wildlife Service.

The 1980 survey, he said, will be conducted in two phases. The first

begins in January when more than 100,000 households randomly selected from across the country will be polled by telephone for information measuring their participation in fishing, hunting and related "nonconsumptive" activities such as wildlife observation, photography and feeding.

During the second phase of the survey in March and April, close to 40,000 individuals will be interviewed by the U. S. Bureau of the Census to gather detailed information about the activities in which they participate, including such things as the amount of time and money spent on fishing, hunting and other wildlife-related activities.

Fish and Wildlife officials note that the survey is paid for by the people who use the fish and wildlife resources — and they are also the ones likely to benefit from the data collected.

Canaan Supporter Honored

A man who played a major role in efforts to preserve West Virginia's Canaan Valley, U. S. Fish and Wildlife Service director William Ashe of Massachusetts, has been honored with the Service's second highest award, the meritorious service award. The award cites his most recent work in connection with the Canaan Valley in West Virginia and the Currituck Outer Banks in North Carolina.

Ashe, a native of Connecticut, has

worked for the Fish and Wildlife Service for 27 years. He is currently the deputy regional director for Region Five which stretches across the northeastern United States.

The citation notes that "his imaginative approach, foresight and persistence have had a dramatic effect in the development of many national wildlife refuges, national fish hatcheries and state-operated game management and fishing areas throughout the United States."

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Hazardous Wastes, Energy Pressures on Natural Resource Among Paramount Cor 'Catastrophic' Environmental Problems Face The W CEQ Member 'Optimistic' About Americans' Perc

The up-coming Congressional battle over the Clean Air Act will be the "opening gun" that will set the stage for the next four years, a four-year period of environmental problems of "unprecedented proportions," according to one of the three former members of the Council on Environmental Quality, Dr. Richard Harris.

Harris met in late January with members of the W. Va. Highlands Conservancy at their Mid-Winter Workshop held in one of the winter-cooled buildings at Jackson's Mill just outside of Weston in Lewis County.

Dr. Harris' address and the subsequent question-and-answer session covered a wide range of topics but concentrated on issues dealt with in a flurry of environmental reports which emerged from the CEQ just days before the inauguration of President Ronald Reagan.

Even in the face of President Reagan's ascendance, Harris said he was optimistic about the future of the environmental movement — "despite the fact that I am unemployed." He said he believed the mandate from the public for environmental watchfulness and caution was stronger now than it was in the 1970's when so many significant strides were made.

He noted that all the nation's major environmental organizations — the Natural Resources Defense Council, the Environmental Defense Fund, the Audubon Society, the Sierra Club and others — were all increasing both their budgets and their memberships. "Public opinion," he said, "is strong and favorable" and there had been "good progress" made to show people that the benefits of air and water pollution control programs outweigh the costs. He noted that a recent study showed that the aggregate benefits of the Clean Air Act were \$21 billion compared with aggregate costs of \$1 billion.

"Still," he said, "that's not enough. You can't put a value on the Canaan Valley," he added, referring to one of the current, prime environmental battles being waged in West Virginia. "How can we put a value on that remarkable resource?"

Dr. Harris also stressed his belief that growth, stability and environmental protection are synonymous. In fact, he noted at one point that one of the biggest disappointments of his service on the CEQ was his inability to convince President Carter that conservation — a strategy he identified as the "quickest, cheapest and most cost-effective" means of protecting the environment — "does not mean sacrifice . . . does not mean 'freezing in the dark' as the oil companies predict."

"Conservation," he said, "has the potential for the largest gains" as the nation moves toward energy security. Such gains, he asserted, "do not mean significant sacrifice (but rather) enormous gains and increases in the standard of living and the quality of life." He noted that since 1973 when the first oil embargo was in effect, industrial output of the nation has risen by 12 per cent while energy consumption was reduced by six percent. Since then, he added, it takes only half as much energy as it once did to raise the

nation's gross national product. He cited a prime example, AT&T, the communications giant which dealt seriously with energy problems in the wake of the 1973 embargo. Through what he termed strict accountability, heating requirements for its 28,000 buildings across the nation were reduced by 28 per cent, the fuel requirements for its 186,000-vehicle fleet were "dramatically reduced" and the volume of its production was increased by 47 per cent while trimming its overall energy consumption by ten per cent.

"And most of these things have been done as a result of a more correct pricing of energy," he emphasized. He indicated his belief that a continuing public shift in attitude would challenge the nation to rely increasingly on domestically-produced supplies of energy — and that such reliance would strain the nation's natural resources.

At the same time, he deemed it "sheer economic folly" for the taxpayers to foot the bill for utilities to convert their power plants from oil to coal, as is proposed in a 50 per cent subsidy program. "Utilities already have a strong economic incentive" for the conversion he said, adding that even with current, on-the-market pollution control devices, the cost of burning coal under current regulations is still half the cost of burning oil.

"No matter what we do," he said, "we will clearly see a shift from oil to coal." He noted that total coal production last year was 800 million tons and that increasing coal exports could be expected in the wake of anticipated action arising from a special task force report on transportation, a report aimed at detailing what can be done to revitalize the nation's coal transportation network.

Further straining that network will

be the on-going synfuels production, a project which Harris noted even President Reagan had called a "massive government boondoggle" — but one which it was as yet unclear he would torpedo. He predicted that if synfuels production is successful in converting coal to liquid fuels, the process could add another 200 to 300 million tons to the nation's current annual production.

The impacts of synfuels production, he said, are little understood but widely feared because of the unknown toxic wastes expected to be produced, wastes which must be disposed of in a country whose citizens are increasingly wary of such practices. He said that a recent survey indicated that 46 per cent of the population was "very worried" about toxic wastes, while 64 per cent was "deeply concerned," and that people asked how far away they'd want to live from various projects equated nuclear power plants and toxic waste dumps. Harris said the survey showed that a nuclear power plant or toxic waste disposal site would both have to be 100 miles away before a majority of those surveyed would not move away or become actively opposed to the construction of either.

"People now perceive hazardous wastes" are equally as deadly as nuclear power, he said — and he indicated they may be right. He noted that within the past ten years, all major causes of death have declined, except for one — cancer. He related that increase to the chemical revolution which began in the 1950's and has continued unabated since.

Even the best, current efforts at containing society's toxic wastes are proving fruitless, he said. He noted that for every dollar in sales by the nation's chemical industry, a pound of hazardous wastes was produced, and that a total of 57 million metric tons of

waste is produced each year — of which only ten per cent is disposed of "properly."

He used that term advisedly, saying that attempts to design secure landfills to hold the toxic wastes had not worked. He said the best attempts at such construction show signs of leakage after no more than two or three years.

"The chemical revolution," he said, "has come home to roost," noting that in the period extending from 1970 to 1976 there was a sudden increase in

the cancer rate, a rate which had been relatively stable prior to that time. He asserted that cancer's 20-to-30-year latency period had expired and that the 200-fold increase in the use of the top 50 chemicals during the last 30 years had finally begun to take its toll in cancers of the digestive tract which, as a group, were rising significantly faster than cancers of other organs.

He also linked rising cancer rates to low-level dosages of contaminants, including chlorinated drinking water which he said has been shown to dou-



e - February, 1981

cerns of Dr. Richard Harris

World, But Former ceptions, Abilities

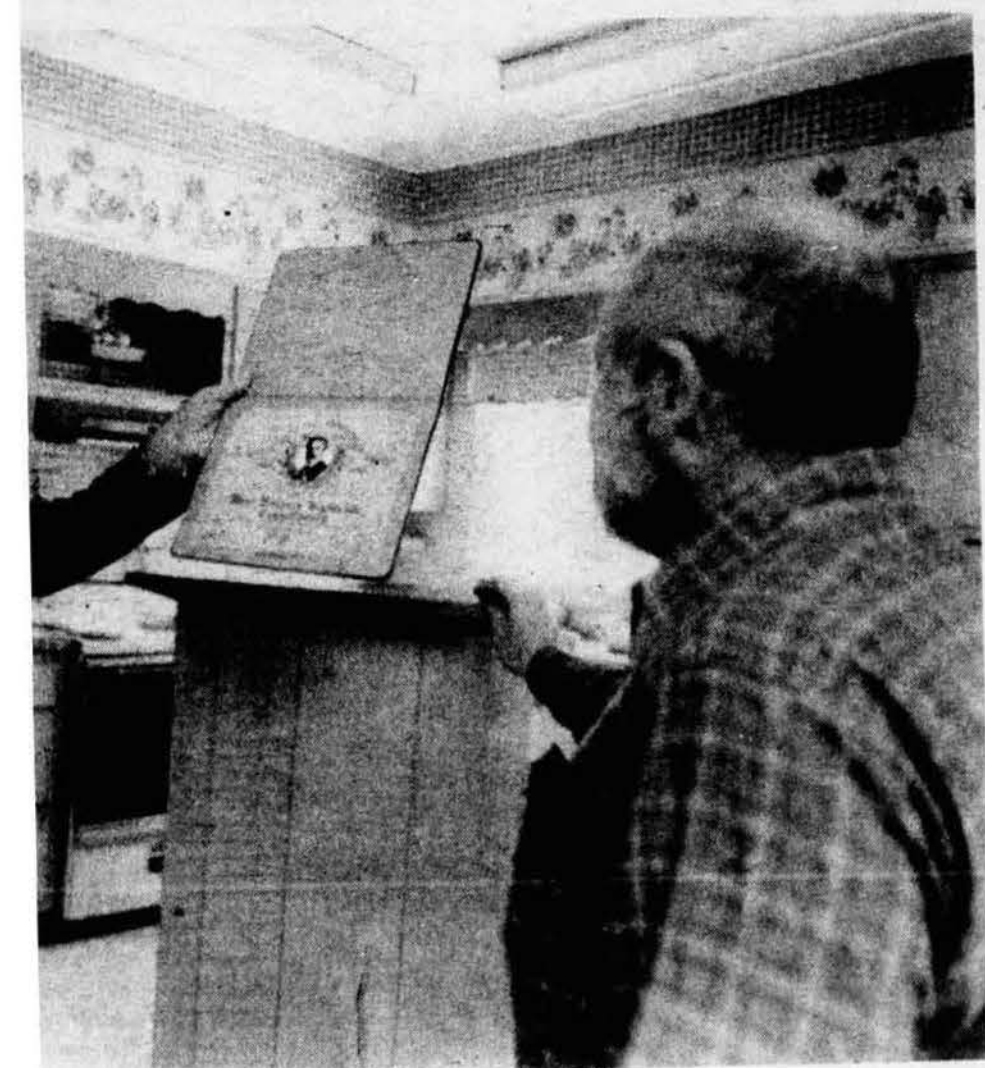
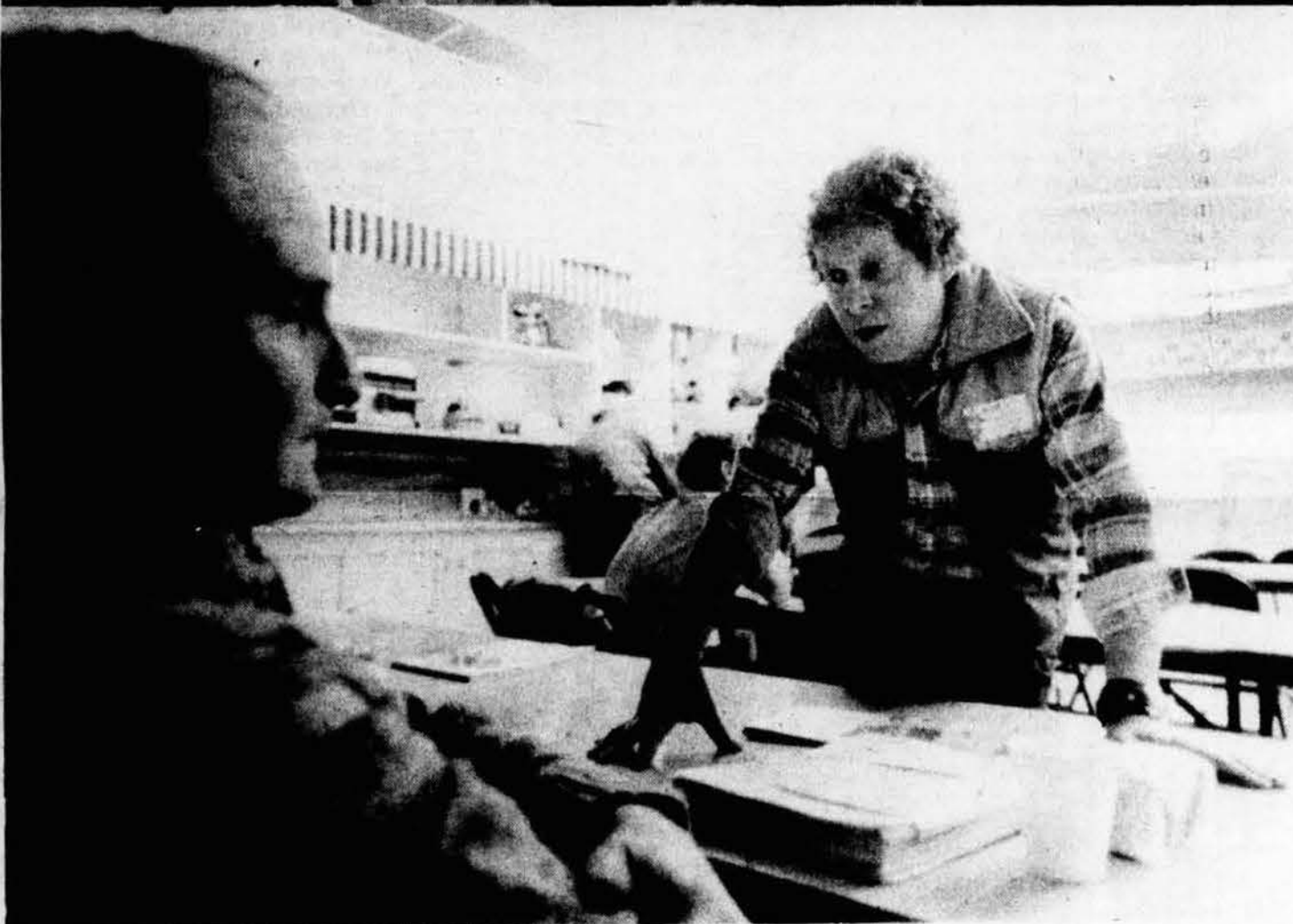
ble the risk of colon, rectal and bladder cancers. He also asserted that assurances that such low-level exposures to toxic chemicals as are predicted from Morgantown's SRC-II plant cannot be believed. "They are not greatly different" from low-level exposures to chlorine in drinking water or the fire-retardant TRIS discovered in children's pajamas.

Low-level contamination is also creeping up on non-chlorinated water supplies, he said, and groundwater quality was a problem that had been "neglected for too long."

Referring to a report issued by the CEQ just days before he spoke, he noted that wells in 40 states had been closed because of contaminated groundwater. The chemicals involved will persist for eons, he said, polluting the nation's groundwater supplies for "geologic times."

But he also indicated there were equally as catastrophic problems converging from other fronts as well. He noted that one of the flurry of reports issued by the CEQ in the last days of the Carter administration dealt with the worldwide production of carbon dioxide and — for the first time anywhere — the issue was dealt with from a policy perspective. He said modeling studies had shown that at current production rates — without the anticipated boost from increased use of coal-fired plants for electrical generation — carbon dioxide levels in the atmosphere will be double their present level within 50 years. That level, he said, will "tend to increase the (globe's) cyclical temperature patterns" — by as much, he said, as seven to ten degrees Centigrade at the poles and some three degrees centigrade in the middle latitudes. That, he said, could be expected to bring about major changes in climate brought by altered wind directions, ocean currents and the melting of the polar ice caps. He said that just on the American seacoasts alone, more than 11 million Americans can expect to be affected by rising ocean levels. Harris said that the only way to avoid "dramatic and catastrophic" increases in the levels of carbon dioxide was to reduce the world's dependence on fossil fuels by everything from conservation to direct conversion of sunlight into energy.

"It's not really us our decisions are going to effect," he concluded. "The struggle is for our children and our children's children."



Making sure she got the right address to write for a flurry of CEQ documents issued during the last hours of the Carter administration is Kate Long (center-left photo, at left), one of some four-dozen members of the W. Va. Highlands Conservancy who had a chance to hear former CEQ member Dr. Richard Harris (center-left photo, at right) address the organization's mid-winter workshop held at Jackson's Mill. Long, a resident of Charleston, was a nominee for — and was subsequently elected to — a post as member-at-large of the Conservancy's board of directors.

In the photo at far left is (left) the Conservancy's new president, Jeanetta Petras of Fairmont, a woman who, after five years with the Conservancy, succeeds out-going president Joe Rieffenberger. She is talking to Bard Montgomery, West Virginia's

premiere "bee-man," the state apiarist for the W. Va. Department of Agriculture. He has assumed the chairmanship of the Shavers Fork Committee.

In the photo at near left is (left) the other featured speaker for the mid-winter workshop, Ralph Mumme, supervisor of the Monongahela National Forest. He is presenting one of two awards which the Conservancy and its members received as a result of the organization's long-standing advocacy of forestry and conservation issues. Receiving the award (right) is out-going Conservancy president Rieffenberger.

"Sometimes," Mumme commented candidly, "we need somebody to kick us in the butt and wake us up. You've been really helpful." His discussion centered around the Forest Service's on-going planning process, a draft of which is due for release early this month and will be reported on in the March issue of the "Voice." Informa-

tion he supplied at the meeting led to the preparation of the article on the current status of mining along the Shavers Fork of the Cheat River (see story and photos elsewhere in this issue).

Also receiving an award for her contributions in the same field was Conservancy member Jeanette Fitzwilliams (top photo, above, right) an Alexandria, Va. woman who is the Conservancy's representative from the Potomac Appalachian Trail Club. She is talking to the Conservancy's newly-elected secretary, Lois Rosier, wife of another Conservancy member, George Rosier who is also the organizational director for the W. Va. Scenic Trails Association (see story elsewhere in this issue).

In the lower photo above is the new highlands vice-president of the organization, George Warrick. He is leaning over a table speaking to Don Gaspar who, by all appearances, is bored stiff.

State Agriculture Department Using Carcinogenic Spray

Gypsy Moth Set for Plunge into Highlands; Forest Damage Inevitable but Controllable

Flies and wasps, burlap bags and noontime rituals — all of these may help, but the director of the Mountain State's plant pest control division believes there's nothing that will stop the spread of the gypsy moth across the Mountain State's highland forests.

There, without concerted efforts to control them, they would decimate the state's timber industry, bringing catastrophic losses as just half-a-dozen larval masses gobble up the leaves of a tree and kill it.

Borne by long strands of silk when the wind shakes them out of the trees, gypsy moth larvae can drift for miles through the air, sometimes joined by male moths but rarely by females who are too laden with eggs, according to A. E. Cole, the director of the plant pest control division of the W. Va. Department of Agriculture.

Cole says an infestation of gypsy moths in the state's eastern panhandle in Jefferson County — a less-than-two-square-mile block — has been known for the last few years. While it is the first major infestation in the state, it is part of the century-long tide of gypsy moths that have been moving steadily southward from Bedford, Mass.

In was there, in 1860, that the moth was first introduced into the United States. Since then, it has been killing trees by the thousands each year. In the years following World War II, Cole explains, spraying of the chemical DDT — that has since been outlawed — kept the moth in check and even managed to drive it back a little.

"Now," Cole said, "we have a great deal of problem using any chemical insecticide." He noted that the main front of the infestation has been steadily moving southward, typically hopping along the ridgetops, defoliating them as the moths drift along on the wind.

"There is no chance of eradication," Cole said. He says the best that can be done is to attempt to manage the populations of gypsy moth so they don't cause catastrophic loss. Cole explains that the moth feeds on the foliage of the trees, especially hardwoods and primarily oak trees, the crop that makes up 65 per cent of the state's highland forest, and is the climax vegetation for virtually all the state's woodlands.

What's planned for this spring is the introduction of tiny flies and wasps which lay their eggs on the gypsy moth larvae and then eat the gypsy moth larvae when they hatch. One of the problems is that the flies and wasps die out as the gypsy moth population decreases. Their usual effectiveness, Cole said, is about 50 to 60 per cent.

Another strategy relies on individuals and — while it's not very effective over massive acreages such as the 800,000-plus acres of the Monongahela National Forest and its surrounding highland woodlands — it can actually save a tree from being killed by larvae gobbling up its leaves.

Cole explained that the "critter feeds at night," then comes down the tree to find a cooler place to spend the day. He said the best thing a homeowner can do is wrap a band of burlap around the tree, then unwrap it once a day and "kill everything you find under there."

The first season of defoliation for Jefferson County are not far off, Cole says. "I'd say within four years or so, we'll begin to see complete defoliation (of some trees) in Jefferson County." His best guess is that within five years, the gypsy moth will have made a major move across West Virginia and be firmly entrenched — although hopefully under sufficient control to prevent major damage to the state's hardwood timber industry.

One aspect of the problem that worries Cole is that neither he nor anybody else really knows how the application of the flies and wasps to the moth problems in Jefferson County — and subsequently to the rest of the state — is going to work. And they know even less about how it will work other parts of the state. "We've got a lot of things to learn about these parasites," he said, referring to the

flies and wasps. "Each mile you go south, you're changing the microclimates . . . That's why we want to use them this year," to determine whether they are going to less effective or more effective.

Despite the parasite control program — and despite any individuals who might decide to attack the moths themselves with burlap sacks and clubs — some spraying will also be used, Cole says, particularly on valuable areas of timber.

While other chemicals will be used as well, one of the major sprays will be Dimilin, a kind of "manufactured biological" that acts to prevent the larvae from molting — the new moth simply stays wrapped up in its larval stage and dies.

Cole admitted that studies by the U. S. Environmental Protection Agency had shown "some degree of cancer-

producing qualities" by the chemical. But he added that the rate of use to control the gypsy moth was "very, very small," indicating it was nothing like the massive doses used in the EPA testing.

He said that its use in the eastern panhandle in Jefferson County had been closely monitored and had been undetected in water supplies — or even in bee populations in the area. He said the chemical is applied just at the time when it will do the most good and even then sprayed so lightly among the treetops that "virtually nothing" reaches the forest floor until the leaves drop off naturally in the fall. By then, he said, there are "very slight" residual levels of the chemical.

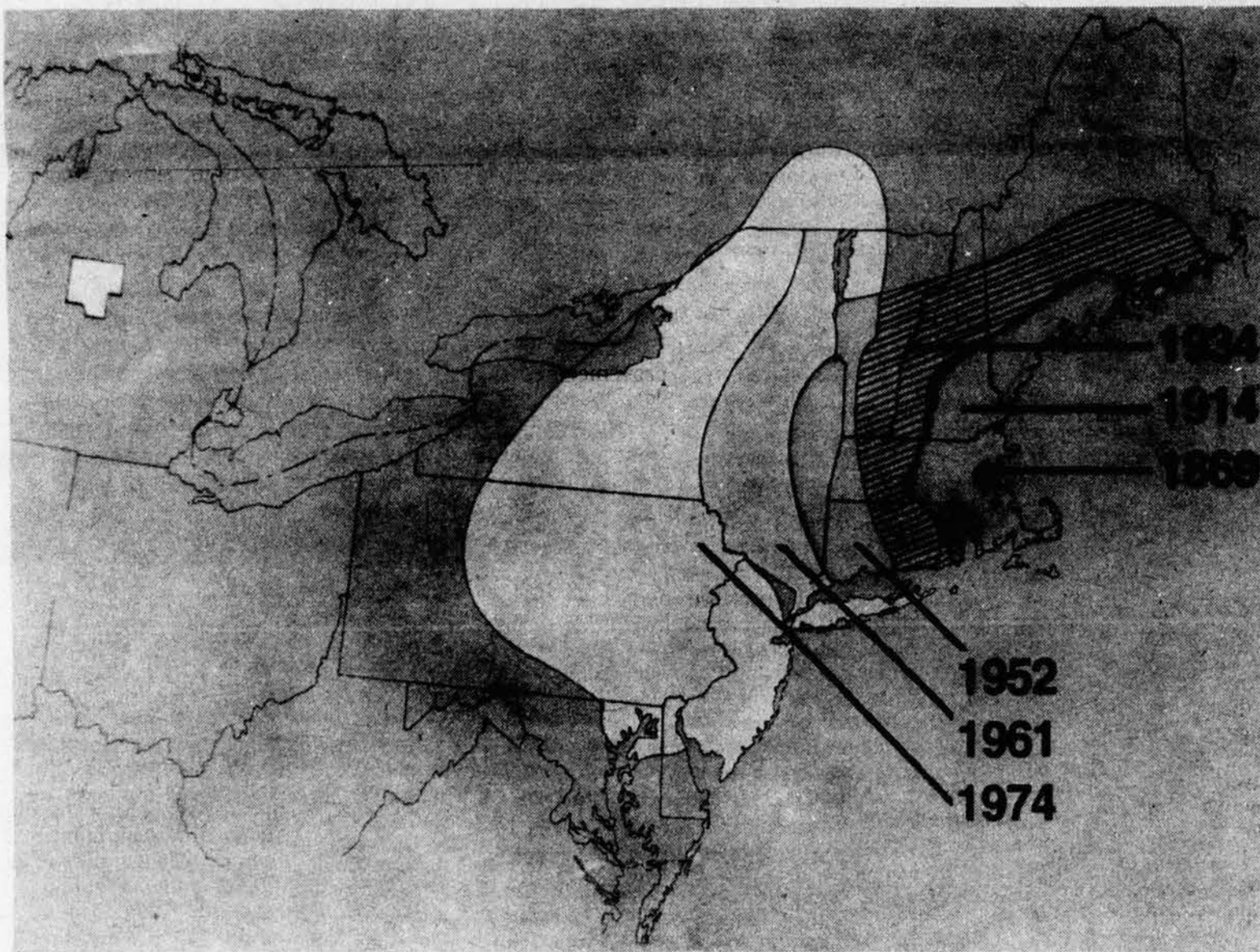
Cole thinks that eradication is still possible in Jefferson County, although it would do little to stop the inevitable

spread of the gypsy moth across the entire state. An area sprayed one year with Dimilin is now entirely free of the moths, and most of the remainder of them are contained in a single section of the county. The area needed to be sprayed would be about one-to-two miles square, he said.

But, in the long run, it wouldn't do a lot of good.

"Larvae and eggs can be moved in by everything from porch furniture to apple crates to trailers . . . We've been catching male moths in Martinsburg," he said, "for years. Just blown by the wind." Egg masses have also been found along the Appalachian Trail which skirts the extreme tip of the eastern panhandle.

"The infestation there," he surmised, "is just a flare-up of the main body of them to the northeast. They're moving down, getting very close. It's inevitable."



Since its introduction into North America near Boston, Mass., the gypsy moth has gradually invaded more and more of the eastern hardwood forest. Early spread was more rapid toward the north and northeast. Now, however, the insect is moving rapidly into the vast hardwood forest of the Appalachian Mountains. A separate infestation is spreading in Michigan. Recently, an established infestation was found in San Jose, Calif.

Map courtesy U. S. Department of Agriculture

DLM Hearing

(Continued from page 1)

Press International's statehouse reporter Andrew Gallagher. The opening paragraph of his story described Neely as "testily" challenging environmental lawyers, a tone which re-appeared in many newspaper headlines across the state — and a tone which Grubb said was uncharacteristic of the other justices — and even Neely himself during the afternoon.

"The other justices were involved in more substantive questioning," Grubb recalled, and he said that in the afternoon even Neely seemed to appreciate not only the gravity of the case but realized that the legal representation Webb had was significant.

"Our outside counsel really helped our case," Grubb said. "We stated it as strongly as we could (and from) the nature of the questioning . . . we got a good feeling."

Joint arguments in the case were made on behalf of the League of Women Voters of the United State, the National Wildlife Federation, the American Civil Liberties Union, the Consumers Union of the United States, Inc., the Natural Resources Defense Council, Inc. and the West Virginia Wildlife Federation.

An advance article published in the Charleston Gazette the day before the hearing outlined the issues as clearly as anyone has done, better even than a review of the case published in the National Law Journal. Gazette staff writer Rosalie Earle wrote, in part:

"The Justice Department is concerned because government agencies want citizens' help in enforcing environmental laws. 'DLM's complaint seriously threatens these important federal policies.' (the briefs) said in arguing that the suit be dismissed. . . . The issues involved are the First Amendment rights of a free press and to petition the government for redress of grievances. The thick briefs filed by all parties raise such questions as:

- Is the right to petition the government an absolute right?
- Is information given by citizens to government agencies immune from legal action?
- Can citizens be required to pay for damages that result from action taken by a government agency on their complaint?
- Does it matter whether a citizen acted out of malice or knowing gave false information?
- Is a private company involved in controversial business a public figure under the law?
- In its brief, the government emphasized that Congress passing environmental laws intended or citizens to take an active role. To hold an informant liable would create a retaliatory weapon that would significantly hamper the free flow of information to federal agencies, the government's brief said.

"According to the government, it makes no difference whether the informant acted in bad faith. Although such conduct would be deplorable, it's still privileged, its brief said.

"And Webb's lawyers argue that even if he acted with amice, his complaints didn't immediately harm the coal company. Government agencies are supposed to serve as a buffer and to make independent determinations on complaints.

"Our democratic system would collapse if we created liability for wrongful inducement of government action; citizens would be loathe to communicate with their representatives for fear of subjecting themselves to an expensive civil action and possible liability," the attorneys for Webb contend.

"But DLM believes that federal statutes encouraging citizen involvement weren't meant as a license for defamation or as a grant of immunity for abuse of citizen participation.

"In support of its libel charge, the coal company asserts that it isn't a public figure even if surface mining is a matter of controversy. The company says it has never played any role of public prominence in the issue of strip mining.

"If any controversy exists, it is because of the media blitz by those being sued 'to turn the case into a cause celebre,' the company's brief charges.

(Continued from page 1)

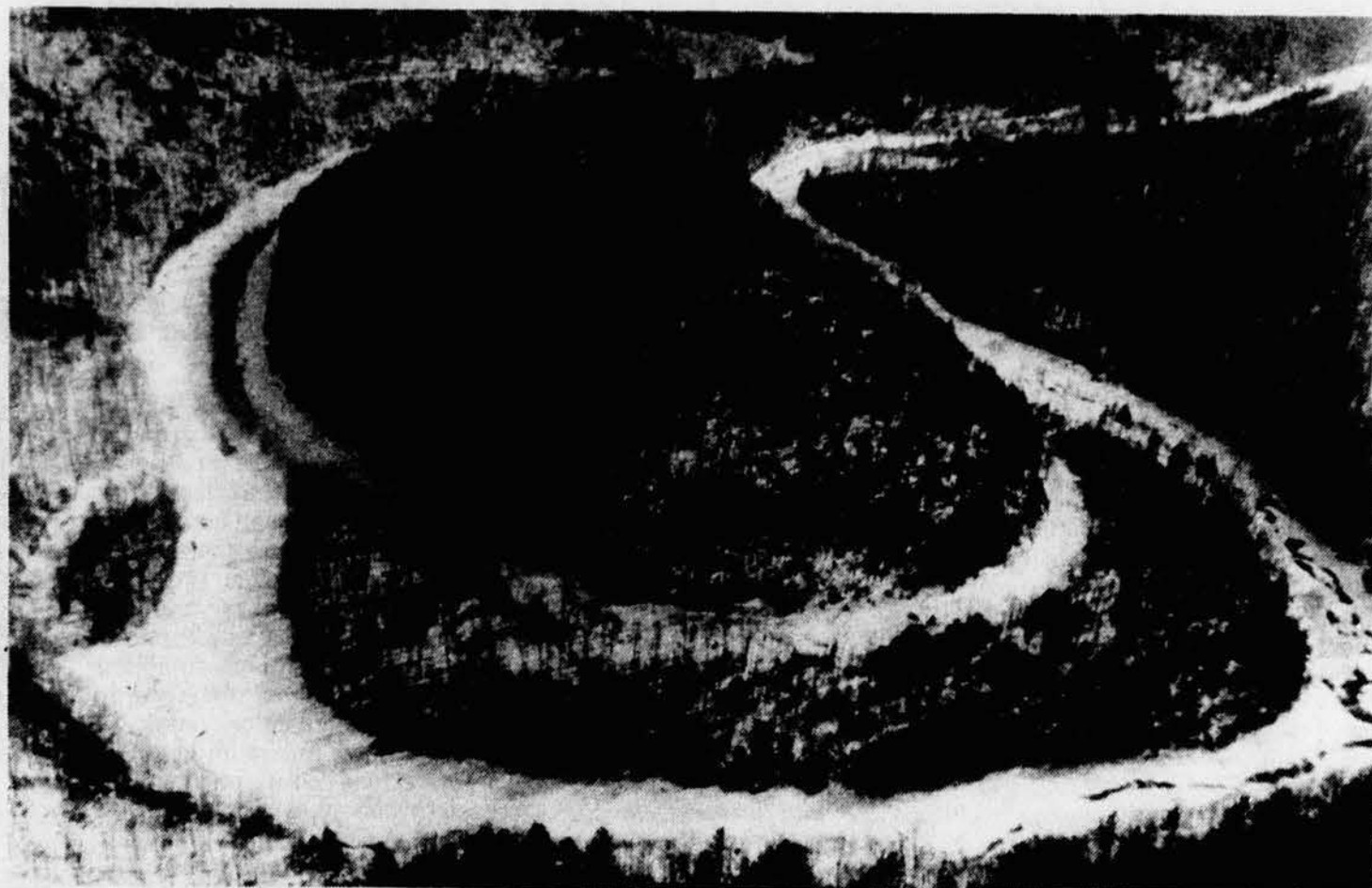
minerals reservations expire and the coal rights revert to the federal government. Already, most oil and gas rights as well as some coal rights Mower held beneath the Forest have reverted due to non-development — or are beyond rescue because of time constraints.

Hard at Work

For weeks now, the sound of coal mining has been ringing through the hills. District ranger Dave Stack of the Monongahela National Forest staff at Bartow reported that coal is being stockpiled at the Glade Run mine. It is the first of six mines being developed under a special agreement with the state's DNR, an agreement which the DNR's director described as assuring "the future environmental integrity" of the Shavers Fork. Under the agreement, reached in late October of 1979, Mower agreed not to develop more than six mines at once while at the same time limiting the total length of haul and access roads to 22 miles — including existing Forest Service roads.

In addition, the agreement called for "strict accordance" with state and federal environmental requirements as well as provisions for the closing of coal cleaning and processing plants "on the least premise." A full-time state mines inspector has been assigned to the Shavers Fork operations to insure compliance while, at the same time, new procedures to monitor the inspections themselves have been instituted.

National Forest ranger Stack described the work on the Fork to date as "in compliance" with Forest Service operating plans. "There are always some minor things," he admitted, which are noted by the foresters, then fixed. "We've always had good cooperation" from the operator, Stack commented.



Mower Lumber Company is moving rapidly toward the development of other mineral rights on the Shavers Fork as well, including those beneath surface lands which it owns near the National Forest.

In the photo above is an island-like bend in the Fork upon which Mower is scheduled to develop the last two of its first six mines as authorized under an agreement reached in October of 1979

with the W. Va. Department of Natural Resources. Further permit work and negotiations with the U. S. Forest Service as well as other federal and state agencies are ahead, however, before actual mining could start.

Farther upstream, Newera Resources of Elkins is proposing the strip mining of 354 acres of half-a-dozen different seams of coal on Lambert Run of the Shavers Fork.

The site is about one-and-one-quarter miles south-southeast of the Barton Knob lookout tower, a section that stretches about three miles up the mountainside from a point about two miles downstream from Cheat Bridge where the area's coal washing plant is located. Both the surface as well as the minerals are owned by Mower Lumber. Newera currently has three other active strip permits.

Mower Developing Shavers Fork Mines

While he described current work as "a little slow — takes a little while to get things oiled up and working" — he did say that two continuous miners are at work drilling the three entries back into the mountainside at Glade Run. There, hailing from Durbin, Bartow and the adjoining Tygart River valley, about ten miners and ten construction workers operate the mining machines and continue working on buildings and other site improvements at the mine. Meanwhile, coal stockpiles mount up at the mine mouth, waiting to be trucked out the Gaudineer Road to the coal loading facilities at Cheat Bridge.

While the road past Gaudineer is nearly complete, work remains on some two dozen turnouts, wider places in the road for traffic to pass and trucks to turn. Nearby, spanning the wintry waters of the Shavers Fork itself, work is proceeding on the renovation of the old bridge to the Linan mine, work that includes replacement of some of the steel superstructure as well as the bridge deck.

Simultaneously, 150 feet up the mountainside from the old Linan mine, bulldozers are at work facing up a second site. Yet to come is the re-development of the old Linan opening virtually on the banks of the Shavers Fork, along with a third Linan mine, as well as a Yokum and Suter mine. The third Linan and Yokum mines are both delayed while the Forest Service awaits receipt of operating plans from Mowers. The Suter mine has a draft environmental assessment which is not yet approved. Still in the early discussion stages are Big John and McGee mines.

NPDES Permit Negotiations

Enviro Energy, Mower's mining arm, currently hold National Pollution Discharge Elimination System (NPDES) permits for both the Glade Run as well as the upper Linan site,

and is now working toward another permit for the lower, old Linan mine. Under a proposal being advanced by the EPA this week, mine effluent from the older Linan site will be emptied into the same outlet as the already approved upper Linan mine, and both will be subject to the same, relatively strict, effluent requirements.

In what may seem a strange turn-about for a coal company, it has proposed a lowering of the permissible acid levels from a pH of six to seven. According to the draft EPA proposal for the NPDES permit, the change was made to allay environmentalists' concerns that marginal acid levels might reduce the tolerance of fish to higher levels of heavy metals expected to be leached from the mountainside soils into the Fork.

Court Battles Yet Undone

After a decade of crossing swords with the environmentalists — most notably the W. Va. Highlands Conservancy — Mower finally, and successfully, parried what appeared to be the last of the Conservancy's thrusts at halting the mining operations. Almost simultaneously, the coal company fought off a federal court injunction that would have halted road construction into the mines' sites while at the same time garnering a ruling from the U. S. Office of Surface Mining regarding Mower's right to tap its coal reserves despite an ongoing study aimed at determining whether or not the entire Shavers Fork watershed should be declared off-limits to coal mining.

Yet, even as the mining is in progress and workers are traveling back and forth to work each day, Conservancy attorneys indicated the saberrattling's not yet done.

Another Injunction

W. Va. University law professor Pat McGinley (he was recently made a

lifetime member of the Conservancy for the legal aid he has proffered not only in connection with the Fork but also on other environmental issues) said this week that he and the Conservancy are seriously considering seeking another federal court injunction. That injunction would halt the work until the U. S. Office of Surface Mining's board of appeals issued a final ruling on a Conservancy appeal of an earlier OSM ruling which granted Mower "valid existing rights" to mine its minerals, rights which would vest in Mower regardless of any decision to declare the watershed off-limits to mining.

McGinley asserted that the prior denial of the Conservancy's injunction request by U. S. District Judge Robert E. Maxwell in Elkins — which, incidentally, is itself being appealed — rested largely on the contention that the Conservancy had failed to give adequate notice to the United States' Secretary of the Interior, the individual at whom the injunction was actually aimed.

Harassment

The entire rear-guard action has so miffed Mower Lumber Company that the firm finally decided to sue the Conservancy for nearly \$8,000 in attorneys fee and other court costs, contending that the court action was "clearly intended merely to harass Mower and Enviro in order to delay their exploitation of Mower's coal resources."

That suit was also filed before Judge Maxwell in Elkins who has declined to issue a decision until such time as the Conservancy's appeals processes are exhausted. McGinley openly scoffed at the suit, calling it "absurd," while another spokesman for the environmental group called it a "transparent attempt to intimidate" the Conservancy's membership as well as other environmental groups in the state.

Publications

A free listing of more than 100 National Wildlife Federation educational publications is now available, including a wide variety of subjects such as solar energy, land use planning, astronomy, birdwatching, recycling, care of injured or orphaned animals and natural pest control, to name a few. Most of these publications are free for the first copy with a charge of four to 20 cents for additional copies. Write to: Education Catalog, National Wildlife Federation, 1412 16th St. NW, Washington, D. C. 20036.

Prospects for Constructive Action Not Good, Says WVHC's Washington Vice-President

Global 2000 Report Relegated to Obscurity By Carter As Reagan Plans to Abolish CEQ

By Stark Biddle

If present trends continue, the world in the year 2000 will be more crowded, less stable ecologically and more vulnerable to disruption than the world we live in now. Serious stresses involving the population, resources and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today."

These are the sobering opening words in the Global 2000 Report to the President, published last summer but quickly relegated to obscurity by the rhetorical dust of the fall election campaigns. The Study attempted something that had not been tried by the federal government before: a comprehensive, integrated look at the world's population, wealth, resources and environment 20 years from now — as the 21st Century begins. Similar studies have been prepared, most notably by the so-called Club of Rome. But this was the first time the U. S. government would attempt to bring its substantial analytical resources to bear on the fundamental question of the earth's carrying capacity — the ability of biological systems to provide adequate resources for human needs. The gloomy prognosis is not new — other reports have carried a similar message. But the fact that this extraordinarily complicated study had been undertaken in the first place and by the federal government gave the undertaking an exposure and credibility that is unique.

President Carter got things rolling in his environmental message to the Congress in May, 1977. He charged the Council on Environmental Quality and the Department of State to take the lead, working with other agencies, to project trends in population, income resources and environment if — and this is an important assumption — present trends continue. The task of coordinating these efforts must have been immense. As the Study points out, most federal agencies have some capability to forecast trends in their particular area of interest, but there is no common methodology or accepted set of working assumptions. Initially, the Report was to have been completed in a year — it took three. Despite admitted deficiencies in methodology and gaps and contradictions in conclusion, the Report is a coherent, readable and convincing profile of the most serious problems that our "spaceship earth" will have to face as we step from the 20th to the 21st Century.

The basic approach was straightforward: start with a forecast of population and wealth and extrapolate the impact of various resources and the environment. All forecasts were developed in the context of three guiding assumptions: first, that present government policies respecting population, resource use and the environment would continue; second, that the rate of technological innovation would remain at rapid historical rates; third, that there will be no

major economic disruption from war or political upheaval. Each of these assumptions tends to favor an optimistic projection: wars do occur; the rate of technological progress may well be declining and it is by no means certain that public politics will remain supportive of resources and environmental concerns — there is recent evidence that, at least in the short run, the contrary may be the case.

In a nutshell, here is a capsulized picture of what we can expect the world to look like 20 years from now — at least according to the authors of the Study.

Population

Under even the most optimistic assumption, world population will grow from a current (1975) level of 4.1 billion people to at least six billion by the year 2000 and probably more than 6.35 billion. But that is only part of the story. By far the largest portion of the increase will occur in the underdeveloped countries (a forecasted increase of 92 per cent) and by 2000 these countries will account for 80 per cent of the world's population. According to the Study, while the rate of increase in the world's population is declining — reflecting affluence in the industrial world and the success of family planning programs — the absolute number of people added to the planet each day in the year 2000 will be greater than the increase we are currently experiencing. This is because the fast-growing poorer countries have a much higher proportion of people of child-bearing age than the slower-growing industrialized countries.

Inevitably, the tremendous increase in population in the poorer countries will lead to migrations from the rural to urban areas and some cities will reach gargantuan proportions: Mexico City, 31 million; Calcutta, 20 million; Cairo, 16 million. As the Study notes, "Rapid urban growth will put extreme pressure on sanitation, water supplies, health care, food and shelter." By the year 2000, these poor countries will have to triple urban services just to stay even with 1975 levels.

Income

The Report projects that the wealth of the world will increase by one-and-one-half times from 1975 to 2000, but because of the growth in population, this will translate into an average per person increase of only 50 per cent. While the poor countries as a group will grow at a faster rate during the period, they start from a much lower base so that the disparity in income by the year 2000 will be much greater than it is today. In rough dollar terms, the industrialized countries of the world will have an average per-person income of \$8,500 by the year 2000 while the developing countries will have an average income of \$600.

Food

In the year 2000, the world will be producing almost twice as much food as it did in 1970. Most of this increase will result from increased ap-

plication of fertilizers, pesticides and herbicides and the growing reliance on irrigation — inputs that have a high energy component. Very little of the increase will come from more arable land since there is not that much left to exploit. In the industrialized countries, the increase in production will translate into a per person increase in consumption of about 20 per cent but in the poorer countries — where caloric intake is now often below minimum levels — per person food consumption will increase by only nine per cent and in some of the poorest Asian countries there may be no increase at all. Because of the increasing reliance on energy-intensive inputs, the real price of food will nearly double.

Forests

In 1978, total forest reserves were roughly 2.9 billion hectares. (A hectare is about the size of a football field.) If present trends continue, deforestation will reduce this to 2.3 billion hectares by the year 2000 and 1.8 billion by 2020. Most of the loss will occur in the tropical forests of the developing countries and by 2020 "virtually all of the physically accessible forest in the LDCs is expected to have been cut."

Water

During the next 25 years, the demand for fresh water will nearly triple, largely for irrigation. According to the study, regional water shortages and a general deterioration in water quality are likely to become worse. In some areas, the cost of exploiting additional water resources will reach prohibitive levels. In the industrialized countries there will be growing competition among different uses — irrigation, power generation, industry, energy exploitation.

Energy

Not surprisingly, energy consumption is projected to increase substantially (up 58 per cent) with the largest jump in the industrialized countries. On a per-person basis, the Study estimates that by the year 2000 each American will be consuming 422 million BTUs per year. In the developing countries, for comparison, each person will be consuming 11 million BTUs. Petroleum will account for most of the increase through 1990 and then begin to tail off as nuclear, hydro, coal and solar become increasingly important. Nevertheless, oil will still account for nearly half of the total energy supplies in the Year 2000.

The study projects a sharp decline in available fuelwood supplies in many countries, reflecting deforestation and, in some cases, desertification. The alternate use of dung and vegetable waste for fuel consumption rather than for fertilizer will accelerate soil deterioration.

Environment

The section on the environment attempts to synthesize these other trends and developments — the picture is most disturbing.

The growing demand for and production of food will cause increased

pressure on arable lands. Soil erosion, loss of soil nutrients, soil compaction and regional water shortages will result. The encroachment of urban lands will accelerate the loss of cropland. By 2000, there will be 20 per cent more desert in the world than there is today. The relative importance of irrigated land will grow, but this will result in problems of salinity, alkalinity and water-logging. Increased use of fertilizers, insecticides and herbicides will have obvious serious environmental consequences. The new high-yielding strains of grains that were introduced during the so-called "Green Revolution" will be increasingly important but, as the Study notes, dependence on genetically identical "monocultures" could lead to catastrophic losses from insect attacks or epidemics.

Growing reliance on herbicides, chemical fertilizers and irrigation coupled with the tremendous increase in the relative size of urban areas will lead to a deterioration in the quality of the world's water resources. The rapid and widespread loss of tropical forests will destabilize water flows and cause increased problems of siltation, flooding and water shortages.

The Study deals with a number of atmospheric problems. Air quality, particularly in the poorer countries, is almost certain to deteriorate as a result of industrial growth and increased consumption of fossil fuels — especially coal. Acid rain will be a growing problem, as will be the rising concentration of carbon dioxide in the atmosphere that may be having an extremely disruptive and dangerous effect on our climate, causing an irreversible warming trend that could harm agricultural production and lead to melting of the polar ice caps and a rise in sea levels.

A final section deals with the loss of plant and animal genetic resources. By 2000, between 15 and 20 per cent of all the species on the

earth could be lost because of destroyed habitat and pollution. Most of the destruction will result from the clearing of tropical forests. This genetic reservoir is of immense potential value as a source of new foods, pharmaceuticals and as a resource for breeding cereal grains that are resistant to disease.

To summarize, the Study forecasts a world of increasing resource scarcity, growing disparity between rich and poor and a gradually deteriorating environment. Of particular concern is the fact that many of the trends and harmful interrelationships will not be evident until the damage is irreversible.

Upon receiving the Study, President Carter set up a cabinet-level task force to report back to him in January on specific organizational and programmatic steps that should be taken to improve the government's capability to deal with the issues raised in the Global 2000 Study. In view of recent reports that President-elect Reagan plans to abolish the Council on Environmental Quality, the prospects for constructive action do not seem particularly good.

The Study comes in three volumes and can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20540. The Summary (\$3.50) contains most of the conclusions and statistical projections. The Technical Report (\$13.00) is a massive document with fascinating back-up articles on all the sectors and subjects that were covered. The Global Model (\$8.00) is a technical description of the forecasting models used by the various agencies with some recommendations for improvements.

If you are concerned with conservation and environmental issues and want the facts and figures at your fingertips in readable and authoritative form, I would strongly recommend that you get a copy

Energy Demands Drop

Virginia Electric and Power Company, which hopes to complete its negotiations to sell half its month-long-stalled Bath County, Va. pumped-storage project to Monongahela Power Company sometime in March, cancelled a partially-built, \$2 billion nuclear reactor and expects other utilities to consider similar action.

VEPCO, a nuclear energy pioneer, cited reduced demand growth, soaring costs, regulatory uncertainty and a belief that conservation can postpone the need for an additional reactor until the late 1990's.

The Wall Street Journal has reported that utilities with large nuclear programs are now being shunned by investors.

Oil companies and the Department of Energy are lowering their forecasts of future energy demand. In 1980 the United States consumed the energy equivalent of 38.3 million barrels of oil daily, down from 39 million in 1979, ac-

ording to DOE. That drop is believed to be partly the result of a sluggish economy, but the amount saved by conservation efforts is greater than most industry and government experts had expected. DOE has reduced its estimate of the growth in energy demand through 1990 to one per cent annually. Two years ago, the DOE forecast was 2.5 per cent.

Rotting Guide

Paralleling mankind's technological advances, roadside litter is becoming increasingly indestructible. The "New Hampshire Campground Owner's Newsletter" reported the following decomposition rates for various types of litter commonly found along country roads: orange peel, two weeks to five months; plastic-coated paper, one to five years; plastic bags, ten to 20 years; plastic film, 20 to 30 years; nylon fabrics, 30 to 40 years; hiking boot soles, 50 to 80 years; aluminum can and tabs, 80 to 100 years.