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the Highlands Voice

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Creating the Habitat [Chasewalk Creek] to get to the DNE Operations Center added spice to the Weekend Review.

WEEKEND REVIEW — FREEZING SUCCESS

The annual Highlands Weekend Review turned out to be a chilly but enthusiastic experience for the one-hundred-fifty or so WVHC members who made the Vooerick to Elkins, October 18-19-20.

All hours were well attended and enjoyed by those who participated. The chicken barbecue froze out in the 29° temperatures, but those who braved the chilling winds to sample the culinary creations of the Elkins Jaycees were amply rewarded.

Saturday evening's program concentrated on land-use in the Highlands in general and on Snowshoe, Inc.'s ski development in particular. More than one-hundred interested partisans heard eloquently rational pleas for

land-use sanity from Virginia Nugent, past National Chairman of the Land-Use Task Force of the League of Women Voters, and Bill Brundage, Conservancy Director-at-Large and prime mover behind the Conservancy's Rivers Committee. Dr. Thomas Brigham, President of Snowshoe, Inc., wound up the program with a detailed audio/visual presentation of the Snowshoe development.

Following the presentations members of the audience kept the participants around for another hour asking questions. While most questions received sufficient answers, enough questions went unanswered or partially answered to keep land-use in everyone's mind for another year at least.

The weekend concluded with a Conservancy Board-of-Directors meeting on Sunday morning. The meeting was well-attended by general members of the Conservancy, and everyone was brought up-to-date on such problem areas as Corridor H, Shavers Fork, the Cranberry Back Country, et al.

Page 3 of this issue is devoted to reports on four of the tours taken by members on Saturday. Pages 4 and 5 present a view of the Snowshoe tour through the lens of Iean Rodman's camera.

The next general meeting of the Conservancy will be the annual Mid-Winter Workshop, scheduled for the end of January in the vicinity of the New River. Details will be announced in December.

NORTH BRANCH POLLUTED

BY ACTIVE MINES

By Ed Light

The headwaters of Washington's water supply, the Potomac River, are highly acidic, with the main sources being active deep mines, along with recent strip mines and gob piles. This information, contrary to industry statements that acid mine drainage is chiefly the product of "orphaned" areas, is contained in a recently published, but not widely publicized, report of the West Virginia Division of Water Resources:

Among the facts cited are:

1. The North Branch of the Potomac River received 79,000 pounds of acid a day from West Virginia mines. The pH has remained below 5 since at least 1968.
2. Major acid tributaries are Buffalo Creek, Abrams Creek, Stony River and Tinsy Swamp Run. All have experienced a sharp rise in acid loads, varying from 55% in 1974, since 1968.

By Ed Light

Hundreds of West Virginia coal mines have filed habitat applications for Federal water pollution permits following official action which was spurred by a recent Campaign Clean Water Report from THE SEIZELANDS VOICE, October 1974. Investigations are now being made into the remaining holdouts for possible Federal advancement actions.

Some five hundred mines were listed by Campaign Clean Water as being in violation of the new Federal Water Pollution Control Act last June by virtue of their not having applied for permits. In response to the adverse publicity EPA and West Virginia U.S. attorneys sent out strong letters to

MINES PERMITS

As Update

each company ordering them to apply if they were discharging water. In response 490 applications were sent to EPA, about half of which were for mines on the CCW list, and the other half for additional mines. Claims that the mines either were not discharging water or were closed came in for 200 mines. This left about fifty mines for which there was no response.

At a November 1 meeting of Federal and State officials a pledge was made to quickly investigate those mines not replying at all, and those claiming no discharge. It was hoped that presentations could soon begin on a few selected violations, and that such presentations would bring the entire industry into compliance.



This month we are overlooking the world of the microbes; you know, germs like bacteria, fungi, and viruses. And why are we doing this? For one thing I am a microbiologist by profession and it won't be difficult for me to write about it, in other words I will know more about what I'm talking for a change. But more importantly the world of the microbe offers tremendous insight as to where we macrobes are going. Each day in a microbiologist's life he is reminded on a small scale of the harsh realities of life. Only the mental compartmentalists fail to see the relationship to other life forms.

The microbiologist seldom works with individuals like other biologists or like the average person in his everyday encounters with his family, his friends, his dog, or the squirrel he is aiming at with his shotgun. Rather, the microbiologist must by necessity work with populations of the organism he is studying due to the inherent small size of the individuals under scrutiny. He makes observations on the effects of environment on that population or the effects of that population on the environment and attributes the overall affect to the combined activities of every member of the microbial population. (Am I making myself heard in the back of the room?)

Another advantage the microbiologist has is that he can study many, many generations of these populations in a comparatively short period of human time. The time it takes for one organism to reproduce itself from the time it is "born" is known as the generation time. For certain bacteria we call coliforms, that time is but a mere 18 minutes. For comparison, the time for humans is usually given in practical terms as 18-20+ years, but of course it is theoretically possible to be a few years earlier. What this means is that the microbiologist can study the entire history of "civilization" of a microbial population from dawn of its history to its doomsday in a mere human working day.

If we assume that we begin with a single bacterial cell, at the end of 18 minutes there will be two cells because these simple creatures haven't learned the joy of sex and reproduce merely dividing in two. Hence, at the end of 36 minutes there ought to be four bacteria, providing that none die off, plenty of nutrients are available, and wastes are properly assimilated. If we wait another 18 minutes we ought to have eight microbes and so on, a doubling of population every generation time or an eightfold increase roughly every hour or so.

Fortunately, were it not for the natural growth limitations of individual cell death, over accumulation of toxic wastes, and depletion of nutrients, we would all be up to our bloomin' eyeballs in bacteria. Let's take (for ease of calculations) a bacterium with a slightly longer generation time, a half an hour. If no cells died, if we had an unlimited amount of nutrients, and if we had the equivalent of a microbial Kanawha River that we could dump all of the wastes in, a single bacterial cell dividing once every 30 minutes for 36 hours would fill 200 five ton trucks

due to this geometric progression. You don't believe that? Raise the digit 2 to the seventy-second power! I'll save you the trouble, the answer will be 47 followed by twenty zeros.

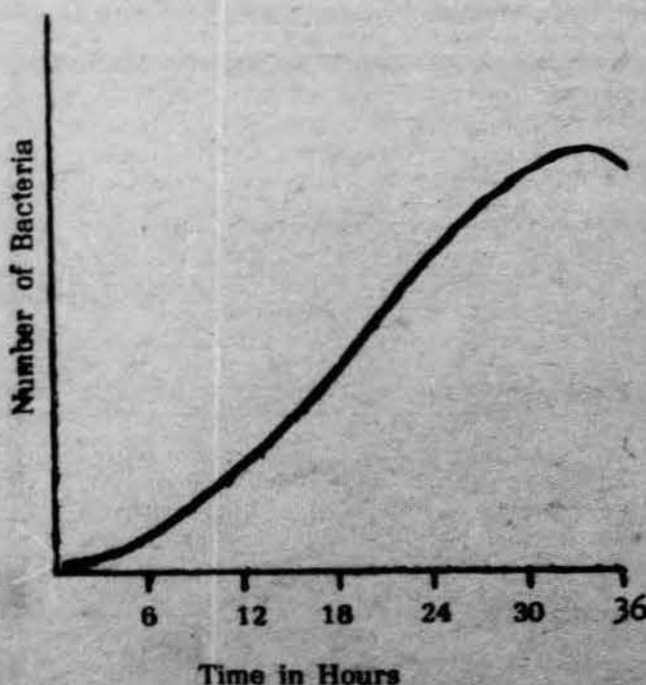
Such large numbers are, like the national debt or the number of tons of West Virginia that have eroded down the rivers, anesthetizing. But we can all agree that is one heck of a passel of germs!

At first the hourly increase in bacteria is scarcely noticeable, but in a few hours there is a considerable population which doubles itself logarithmically or exponentially. It is this phenomenon of exponential growth that the microbiologist is so familiar with and which he can measure very easily. Exponential growth

explains why a single anthrax bacillus can bring a one ton bull to its knees over night, prostrate with fever and toxemia. Exponential growth explains why a farm pond in August suddenly "blooms" and is covered with green scum, the visible effect of billions of tiny algae cells. Exponential growth explains why a huge vat of water, grain, malt and hops can be magically transformed into hundreds of bottles of Schlitz beer within a few very short days, courtesy of the tiny, fermentative yeasts who were the magicians.

Well, what in the hell does this have to do with conservation, West Virginia, and the price of eggs? Everything. You are experiencing acute shortages of almost everything. Your favorite food products are disappearing from the store. You can't buy fertilizer or chicken wire. Soon, aluminum foil will no longer be a household item.

The price of everything has skyrocketed. Have you priced anti-freeze, snow tires or even gasoline lately? Is this run-away inflation as our new president thinks, or is it something else more familiar to the microbiologist? If we plot on a graph the number of bacteria present during a period of growth against time, we would get something like below:



Notice that there is an initial lag period followed by a very sharp, steady rise in numbers of cells (i.e. growth), and then a gradual tapering off. The upper part of the curve concerns us here because this is the end of the exponential growth period. The nutrients have been exhausted, the wastes have accumulated to the point where they are toxic, and the number of cell deaths becomes greater than the new cells being "born." This is called a growth curve and every living species, including man, has one. The microbiologist is able to see it easier, that's all. The limits of growth on any living thing are well known.

Well, we humans for the past 50 or 60 years have enjoyed a tremendous period of exponential growth as we have explored every corner of the earth and have exploited every natural resource. We are nearing the top of the curve. Oh, wastes haven't yet accumulated to the point where they

are killing us all, but you should be reminded that things which happen exponentially also happen very fast. It will begin to happen before you realize it. But more importantly, the factor that is currently inhibiting growth and telling us to slow down is the depletion of our natural

resources. It is this reason that you are currently experiencing shortages and high prices. Although the economists predict recovery, I have never known an economist who has taken the steady, dwindling decline of natural resources under consideration. All systems and theories of economics make one false assumption, an unlimited amount of natural resources.

For years we have wasted our resources because they are cheap and plentiful. The electric company gave us a flat rate for our electricity instead of charging us for how much we used. The gas companies pushed an

attractive gas light for every yard, one that always burns and is not shut off. Every product manufacturer hired teams of experts to think up ways to use or consume more of their product. Now we are short of everything and only now are we beginning to pay.

Although the current economic crisis may have come on you unexpectedly and may be making you uncomfortable, it is really not surprising to the observer with microbiological perspective for the witnesses these factors everyday of his working life. We predict a continuation of the current scene. It will never get any better and you may as well make up your

mind that things will even get worse. It is past time to begin thinking of how to control our own numbers, our own commercial and economic growth, of how to limit our resource utilization. It is past time to begin paying for the true costs of coal, gasoline, plastics, chemicals, throwaway items of all descriptions, and almost everything else common to our everyday lives. Only when we begin paying the true cost of these items, will we quit wasting them.

THE LIMITS TO GROWTH

by Nicholas Zveglatsov

Bob suggested I add to this month's OVERLOOK a review of "The Limits to Growth." I am not going to say much about this extraordinary book except that if you want to understand the economic future of the human race, study this book. It's \$1.25 from Signet Books, or if you send me \$1.50 I will mail you one myself (3703 Jenifer St. NW, Washington, DC 20015.)

"The Limits to Growth" explains in concrete layman's terms a model of the economic future of the human race run at the Massachusetts Institute of Technology. In economist's terms a "model" is not much more than the working out of the kind of calculation the President of the Conservancy does at the end of the Fall Weekend ("If I drop the price of cold barbecued chickens to \$2.00 can I sell a hundred of them?")

In "The Limits to Growth" model the effects considered were such as these:

1. World food production divided by population gives nutrition per person.
2. The less the nutrition per person the higher the death rate.
3. The less the nutrition per person the higher the birth rate.

To "run" the model you choose values for population, food supply, and the exact relation between nutrition and birth and death rates - for example, current values from 1974. (2) and (3) together enable you to predict 1975 population, therefore 1975 nutrition, therefore 1976 population, and so on. This game is usually played on a computer, which makes it easier but introduces no magical new knowledge.

"The Limits to Growth" model includes many more relationships than the three given above - in fact it attempts to include all presently known large-scale interactions between the three great occupations of the human race - agriculture, industry and population.

The result of the model is this: There is no way to avoid the starvation and poverty of the human race by the year 2100 unless we put behind us both population growth and industrial growth.

The second part of this result is hard for most of us to swallow. It is easy for a thrifty person to see that too many children will beggar the farm, not so easy to see that too much thrift will do the same. The trouble is that thrift generates more investment, more tools, more capital - and these enable us to beggar the farm by exhausting the finite resources of fuel, minerals and fertility.

So much for a brief relay of the pitiless message of "The Limits to Growth." Is there any hope of avoiding its bleak prediction? In particular, is there any hope of ending economic growth in this country given the enormous financial interests that ride on the bunko fraud of our spendthrift prosperity? Interestingly enough - there is. Economic growth has ceased in this country, at least in the last nine months, because of the rise in the cost of oil. This is the "recession" which all our politicians hysterically promise us to avoid.

Before joining in the hysteria read "The Limits to Growth" and try looking at it from your grandchildren's point of view. What is a recession to us may just possibly look to them like the day that Mommaw and Poppaw tightened their belts, straightened up, and saved the farm.

Forest Service Takes Ax To Mountaineering Cabin

Earlier this year the Potomac Appalachian Trail Club purchased a piece of land near Seneca Rocks, W.Va., expecting to construct on it a cabin as a memorial to PATC'er Dave Templeton. The Mountaineering Section, of which Dave had been an active member until his untimely death in a climbing accident, had a particular interest in this project and had done much of the spade work in selecting the site and developing the necessary information concerning design and possible manufacturers of the proposed cabin. Seneca Rocks is a climbers' paradise, and it was expected that the cabin would find its heaviest use among the climbing community of PATC.

The Council was on the verge of awarding a contract for the cabin when word came that the Forest Service would not permit the cabin to be built and would exercise its legal right to condemn the land, which abuts the National Forest.

Subsequent negotiations, in which the Club stressed that the proposed use of the land for a PATC cabin would be compatible with the environment and with Forest objectives for the Spruce Knob-Seneca Rocks area, proved unavailing, and at its meeting on September 10 the Council authorized sale of the property to the Forest Service.

An active search for a new site for the David Templeton Memorial Cabin in the Spruce Knob-Seneca Rocks area is under way.

[From the POTOMAC APPALACHIAN, OCT. 74]

WEEKEND REVIEW — TOUR REPORTS

SNOWSHOE

Given the task of building a West Virginia mountain, Shavers Mountain is well what I might have come up with - a long ridge as high, almost, as its neighbors - and then a shallow raingutter down its crest the whole way, making a valley in the sky and forming a high stream not quite the same as all the other streams. To see this on a 3D map is rather startling.

It's cold up there with lots of snow and fog and frost and rain. Beaver ponds and spruce. Of course it has been worked over by the lumber companies but like all the land, capable and recovering.

It never did belong to me but like all wild places, I "owned" it. No more. Soon there will be a ski resort there. People will buy lots and build and they will own it.

Now I'm a skier. And Snowshoe is doing a dandy job. They aren't making any unnecessary mess and they are going out of the way to keep it non-offensive to eco-types. I've always said that towns should take their drinking water out of the river downstream of the sewage outlet. Snowshoe won't quite do that, but they will use the same lake. It will be small - enough to cool the water and to make snow - maybe to sail a tiny boat.

The lifts will be good ones - some into the center bowl and one down the outside serving the steeper longer runs. Snow making all over the runs. The old logging trails for cross country. And the whole thing is geared to giving urban dwellers a feel of wilderness - or what they will be pleased to think of as wilderness. Just because a raging storm beats outside the door and you can easily get lost or hurt if you don't know what you're doing - the very fact of the door precludes wilderness.

I'm afraid that there will be a wall between Snowshoe and the world, inside which you can't go unless money rubs off you one way or another.

As I've said, I ski. Over the years, lots of money has rubbed off me and more probably will again. Snowshoe will be a pretty dandy place. But I'll never be able to start at the head of Shavers Fork bowl and walk the length of the stream and get the same feelings I once could have. The world changes as it moves and all change isn't bad. Maybe I'll get a chance to make a perfect powder run - parallel turns all smoothly linked, with all the great things that turn skiers on. But a prime mountain top can't be "mine" again and I confess a deep twinge of sadness.

Given that the resort proper will have tightly regulated rules about what can and can't be done - what about land close to but not part of the complex? Is the county ready to see that land-use planning is more than having some control of his neighbors messes as well? Think of a ten storie highrise in Mace. With a septic tank.

- Jean Rodman

SENECA INDIAN TRAIL

As part of the Review Weekend, 13 people, led by Mitchell Cunningham, took a leisurely walk along part of the Seneca Indian Trail. Leaving the cars along Route 33, the group walked up a dirt road through an area which had recently been clear-cut. Then branching off the road near the crest of a mountain, the hikers took the worn path of the trail through a wooded area to Mr. Cunningham's farm.

High points of the trip were comments by Mr. Cunningham and Don Rice, president of the Randolph County Historical Society, on the history of the trail; the beautiful fall scenery, and the sighting of a doe calmly crossing the path.

- Robert A. White

CORRIDOR H

The Corridor H tour concentrated on the portion of highway under construction between Elkins and the bridge over Shavers Fork just east of Bowden. Morning and afternoon tours were held. The AM group held a short "skull" session and then toured road cuts and the Bowden National Fish Hatchery where considerable effects of Corridor H construction have been noted. The afternoon group held an extended discussion session, but did not take to the field.

Leaders were Don Phares, fisheries biologist with the W.Va. Department of Natural Resources, and Roy Ferris, Department of Highways construction supervisor for the portion of the Corridor now being built. Several participants felt the need for a DOH highway planner rather than someone who implements the planning decisions.

The leaders discussed the disturbance of two of the springs which feed the Bowden Hatchery. Some 150,000 young trout were killed when the South spring emitted large amounts of siltation during rains which fell while the road was being graded in the vicinity of the spring. It is believe that North Spring (which is more important to Bowden because of its near-perfect temperature and its heavy flow) may be disturbed when construction of the leg between Bowden and Wymer is begun. The DOH does not know exactly how problems with the South Spring occurred.

According to Don Phares, the biggest problem for Shavers Fork is siltation during and temporarily after construction. Shavers Fork does not have a native trout population, and so no permanent damage will be done to game fish. However, if the Corridor continues the route will cross several streams having native trout populations.

The group also learned that the DOH is ready to make public an environmental impact statement for the Bowden to Wymer leg, but land has already been acquired for this route, making the statement somewhat useless.

- Lowell Markey

HIGH FALLS OF CHEAT

Thirty-seven hikers, determined to brave the cold weather, set off early Saturday morning for a hike to the High Falls of the Cheat, a remote, scenic spot along Shavers Fork. We split up into two groups at Bemis: the more conservative ones, led by Dan Kincaid, hiked 4 miles in along the railroad tracks, while the more adventurours, led by Bruce Sundquist, took the "short-cut", a 2-mile hike up the Beulah Sidings trail to the ridge top and then down by way of an abandoned trail (when we could find it!). At the ridge top, where the Beulah Sidings and Shavers Mountain trails intersect, we notice that the trail sign had been clawed and broken - probably, Bruce noted, the work of a rambunctious local bear. The sun came out intermittently in the morning, highlighting the late Fall colors in the woods, and warming us. Both groups met for lunch at the falls. The water was unusually high for October, which made the site even more spectacular than was expected. The spray from the falls was chilling, but some hikers had the forethought to bring along wine or a thermos of coffee or soup, which certainly, they assured us, "hit the spot." On the return trip the two groups reorganized, as some wanted to try the alternate route back. By then it had clouded over and there were light snow flurries, which cast a rather tranquil, serene spirit over the highlands. We were back to our cars by mid-afternoon, feeling somewhat tired and chilly but glad we had made the trip and eager to return there again in the near future.

- Jane Eggleston



WEEKEND REVIEW



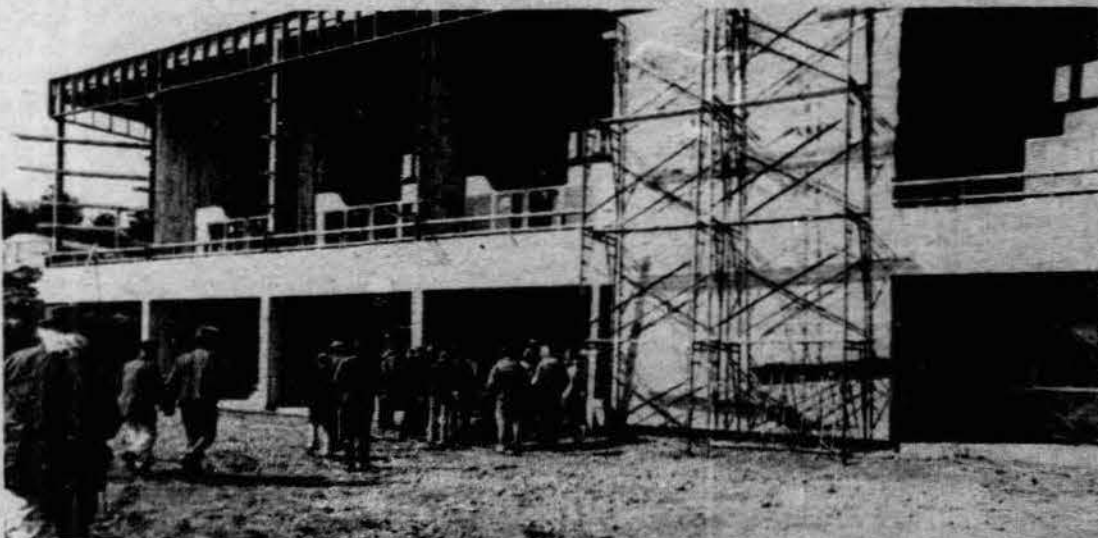
Snowshoe sits high atop Cheat Mountain overlooking the headwaters of Shavers Fork. Here Conservancy members are looking down one of Snowshoe's ski slopes into the "bowl" of Shavers Fork.



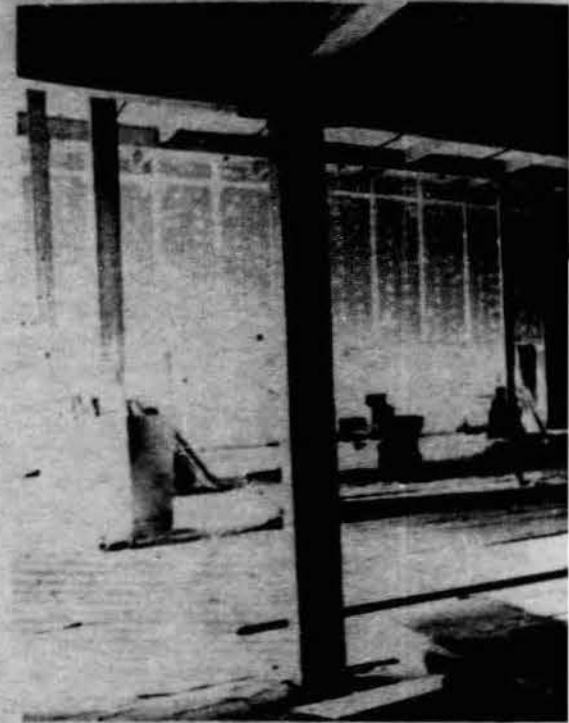
The beginners slope at Snowshoe angles gently down the mountainside in front of the lodge.



Now under construction and expected to be in operation this winter is the day-use ski lodge.



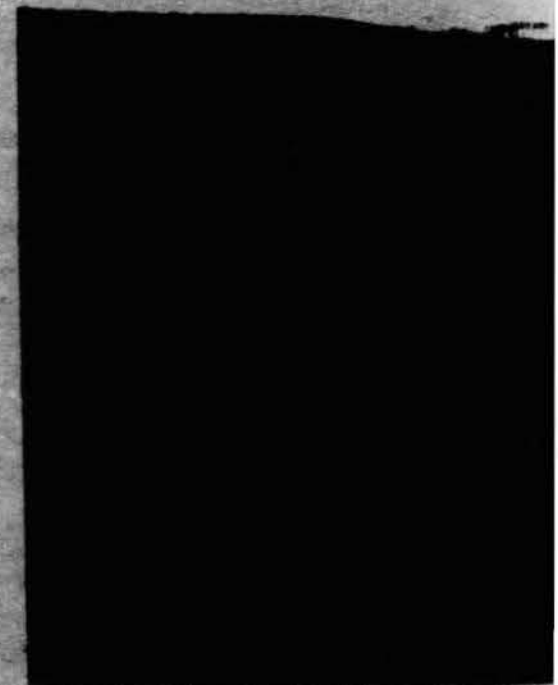
Much of the lumber used on the exterior of the day-use lodge came from spruce trees which were cut on the site of the lodge.



The cafeteria area of the day-use lodge



Lift tower for the huge triple chair-lift



The Cap Run ski slope slashes Run is in the Elk River Drainage. ridgetop visible in the photo.

SNOWSHOE HIGHLIGHTS

Photos by JEAN RODMAN



Probably the most controversial feature of Snowshoe is the water treatment plant. The plant requires construction of a lake on the Shavers Fork. From this plant will come drinking water for Snowshoe, sewage treatment and water for snow-making.



Shavers Fork, innocent victim of Snowshoe construction, and the reason for the Conservancy's concern over the development.



Snowshoe President, Dr. Thomas Brigham, holds questions from Conservancy members after his presentation Saturday night, Oct. 19.



the mountain side for 7500 feet. Cup Shavers Fork lies on the other side of the



NO STRIP REPORT FOR NOVEMBER

By Ron Hardway

The last few issues of the VOICE have carried lengthy lists of strip-mining applications which came to the editor's attention during each preceding month. This month the list is missing. The reason for its absence is acute depression on the part of the editor. Why depression? Consider:

1. After months of diddling around the "Reclamation Bored of Review" approved Lang Brothers strip permit, #977, for Shavers Fork. The Bored gave no reason for its application, indicating in its usual sneering manner that there was nothing wrong with the permit in the first place. The implications of this foregone decision is that half a dozen or so later permits for the Shavers Fork watershed, the most recent being for a whopping 803 acres, will now be routinely approved - not that anyone every seriously thought they would not be approved in the first place.

2. After loud protests from local residents of Summersville the same Bored previously mentioned issued a permit for a strip within the

city limits of Summersville. For us non-compromise types our first impulse was to gleefully click together our seedy heels and shout "Justice comes to he who waits." After all, Nicholas County, of which Summersville is the nominal capital, has been ripped asunder by strippers, and nary a whimper was heard from Nicholas Countians as long as the strippers stayed out in the countryside away from town. True, a few folks from Tioga objected to being marooned in the middle of a 4,000 acres strip permit, but all roads out of Tioga lead to Webster County anyway, so no one in Summersville gave a damn about that.

But after a few cheerful rounds of "Now we'll see how they like their own medicine," our thoughts sobered somewhat. Summersville today, where tomorrow? Webster Springs, Sutton, Elkins, Morgantown? Could be anywhere. Most towns in West Virginia are already undercut with vast systems of deep mining tunnels, some of which probably journey to the center of the earth (if America is ever invaded by the Chinese they'll not come by land,

sea or air - they'll come through the damned mine tunnels, popping up like a grand army of prairie dogs while our Minutemen gaze skyward.) Probably there are layers of coal above these old deep mines, and, theoretically, most of it could be stripped - after shoving aside a few hotels, businesses and schools.

3. And now it seems that the U.S. Forest Service has joined the mad scramble to sign over public property to private interests. SMA #1348, published the last week of October in the Webster County newspapers, revealed that part of the property covered in the permit is Monongahela National Forest land on Gauley River. We're still trying to find our exactly what is going on with #1348, but the permit application would seem to make it plain that the USFS is now leasing public property for stripping. If we find our differently we'll explain next issue. If we find we're right we'll have a few comments too.

With all of the above cropping us in the last month who gives a damn about the other 4000 or so acres the strippers applied for in October? That's why there is no strip report this month.

Neutralizing Trout Stream Acidity

By Don Brannon
President

Kanawha Valley Chapter of Trout Unlimited

The Middle Fork of the Williams River in the Cranberry Back country of the Monongahela National Forest was once a good native brook trout stream but within the last twenty years it turned too acid for brook trout reproduction in most of its watershed. The Kanawha Valley Chapter undertook a study of this watershed, known as the Middle Fork Project, in an effort to obtain all the information we could on the precipitation, soils, geology, flora, fauna and water chemistry. Most of the rain water collected has been acidic and it would appear that acid rain water may be the principal culprit in increasing the acidity of the stream water in this poorly buffered watershed.

Part of this study has dealt with finding a suitable neutralization method for the acidity in the stream. Since the Cranberry Back country is being considered for designation as a Wilderness Area, the method must be unobtrusive and long lasting, hopefully rule out limestone drums and devices that meter out basic materials because they would require constant replenishment of materials and attention, which would

be impossible in a Wilderness Area. Static beds of limestone have proven to be relatively ineffective because the limestone develops a coating rendering it ineffective. The only alternative appeared to be a method that had not been attempted to our knowledge which would consist of a dynamic bed of limestone that would be free to move during periods of high water in this high gradient stream. Hopefully the abrasive action of the moving limestone would prevent the building up of an extensive coating on the limestone.

A Cooperative Agreement was entered into between the Kanawha Valley Chapter and the Monongahela National Forest that permitted the placing of limestone in an acid tributary of the Dogway Fork of the Cranberry River, which is just over the mountain from the Middle fork. This tributary is more acid than the Middle Fork, has a similar low iron content, and has much better access since a good Forest Service road crosses it.

Last March (1974) members of the Kanawha Valley Chapter and interested students from West Virginia Institute of Technology and Richwood High School placed 40 tons of ¾ to 1 inch limestone gravel in the tributary. The placing of the limestone took three weekends utilizing a bucket brigade in order to insure a fairly even scattering over an approximately 200 yard segment of the stream bed. However, it appears that merely dumping the limestone gravel from the road would have accomplished the same purpose since the bed is continually moving downstream during the periods of high water.

After a short period of time, a "Coating appeared on the limestone and the stirring of the bed produced a cloud

of a brownish fluffy material being washed downstream from the disturbed area. Subsequent analysis proved that the "coating" was really sand, an impurity in the limestone. Apparently, the calcium carbonate is being eaten away leaving a loosely adhering "coating" of the impurities of the limestone. It has been noted that most of the "coating" had disappeared after periods of high water due to the tumbling action taken place in the bed.

Water samples upstream and downstream of the limestone bed are being taken in order to see the change in pH ("change in pH") that is taking place as the acid water passes over the limestone. A low value of "change in pH" means that little neutralization is taking place and is a higher value means more neutralization is taking place. During the months of March and April a "change in pH" of about 0.9 was consistently observed which indicated some neutralization was taking place. In May in" pH started increasing and reached a value of approximately 1.5 by the last of June. The "change in" pH has remained at approximately 1.5 ever since. Although this does not sound like much of a change, a "change in" pH of 1.5 indicates that approximately 97% of the "free" acidity has been neutralized.

The lowest pH obtained downstream of the limestone since the middle of May has been 5.40 pH units which is sufficient for brook trout to grow and reproduce according to our Middle Fork observations.

Although these are preliminary results, this neutralization method appears to hold promise for relatively high gradient acid streams with low iron content.

ALLEGHENY TRAIL CONCEPT PRESENTED AT SYMPOSIUM

Bob Tabor and Arthur Foley presented the Allegheny Trail concept to the National Trails Council, Eastern Regional Symposium held October 17-20, 1974, at Cumberland Mountain State Park, Crossville, Tennessee. (The National Trails Council represents off-road vehicle users, saddle horse riders, and bicyclists as well as hikers.) The theme of the conference was "Eastern Trails - Present Status and Future Possibilities."

The conference opened with a keynote address given by Mr. Gunnar Peterson, Chairman of the National Trails Council. Other speakers include representatives of the U.S. Forest Service, National Park Service, and Bureau of Outdoor Recreation. Each spoke of this agency's role and goals for trail development. The morning session concluded with an excellent presentation by Mr. Clarence Streetman, Public Relations Manger of Bowaters Southern Paper Corporation. His topic - "Trail Development on Private Lands."

Bob Tabor participated in this panel, presenting an excellent program describing the Allegheny Trail in West Virginia. His presentation centered upon current status of the trail, the difficulties we have encountered, and of how the Allegheny Trail will be a major connecting link in the East. The idea of a new 1,000 mile trail paralleling the Appalachian Trail through the Mid-East was very appealing to those present. A connection of the Cumberland Trail - Allegheny Trail - Tuscorora Trail would provide a through trail from Chattanooga, Tennessee northward to Harrisburg, Pennsylvania.

It was especially gratifying to learn of the timber industry's participation in this conference. Not only did Bowaters Southern Paper Corporation participate in the program discussions, they also presented a three hour demonstration of proper trail construction, using a number of paid employees to demonstrate construction methods of a graded trail along a mountainside.

NOMINATING COMMITTEE PREPARING SLATE

The Nominating Committee of the West Virginia Highlands Conservancy is now accepting names of candidates to fill Conservancy offices. The election will be held during the Mid-Winter Workshop in January.

The following candidates have agreed to stand for an office in January:

President: Charles Carlson (Charleston)
Highlands Vice-President: Lowell Markey (Keyser)
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Tom Williams (Alexandria, VA)

Director - 1 year term: Joe Rieffenberger (Elkins)
All members are reminded that nominations will be received by the Nominating Committee Chairman until twenty-four hours prior to the election. Members are also reminded that the consent of the nominees must be obtained before submitting any nominee to the Chairman.

Nominating Committee Chairman is Robert G. Burroil, 1412 Western Avenue, Morgantown, WV 26505.

The Honorable Earl L. Butz
Secretary of Agriculture
Department of Agriculture
Washington, DC 20250

Dear Mr. Secretary:

Part of the Cranberry Backcountry and contiguous public land located in the Monongahela National Forest near the towns of Richwood and Webster Springs, West Virginia, have been proposed by conservationists for inclusion in the National Wilderness Preservation System as the Cranberry Wilderness. Legislation to that effect has passed the Senate (S.3433) and is pending in the House (HR13455).

These actions present serious problems because the minerals are not in public ownership. Indeed, the mineral owner appears already to be undertaking physical development of his coal property there.

The deed affecting the surface and mineral rights is of the Board Form type as shown below.

"There is excepted and reserved all coal and other minerals, together with the right to enter upon and under said lands and to mine, excavate and remove all of said coal and other minerals, and to remove over, upon, through and under said lands the coal and other minerals from and under adjacent and neighboring lands, and also the right to enter upon and under said granted lands and make and construct all necessary structures, railroads, roads, ways, excavations, air shafts, drains, and openings necessary or convenient for mining and removal of the said coal and other minerals from adjacent and neighboring lands without being liable for any injury or damage done thereby to the overlying surface or to anything therein or thereon, or to any water course therein or thereon. There is also in like manner excepted and reserved the right to take and use so much of the surface at and around each mine or opening, or at convenient places, which said companies may need for the mining of coal and other minerals as may be necessary or convenient for such purposes, including land upon which to construct tipples, tracks, coke ovens, miners' houses and all other structures necessary for the mining and removal of said coal and minerals." There is no provision in this deed for payment for any damage to the surface except for the market value of timber destroyed plus five dollars per acre.

At the time (1909) this deed was drawn up, I doubt that the parties had conceived that wilderness would ever have a positive value to man. This was forty years after the Washburn-Langford-Doane expedition to the Yellowstone, and thirty-seven years after its elevation to National Park status. Hence, there was no excuse for such negligence.

Surely the authors did not envision the technological horrors of strip mining. Surely this deed is inconsistent with modern law; it is not possible by present mining methods to remove all the coal (thin as well as thick seams, highly acid as well as low sulfur) under existing state and federal laws considering air and water pollution and mine safety. Surely the mine operator is now liable to prosecution for pollution and siltation damage to water courses. Surely there are laws which now regulate the construction and location of railroads, coke ovens, company towns, and even of the mines themselves.

Surely, it must follow that other aspects of this deed are also impossibly vague and arbitrary in attempting excessively to limit future liability for inappropriate subordination of perpetual surface values to nonrenewable (mineral) resources. Compare this wording to the express warranty vs. the implied warranty for products and services. The authors of this broad form deed clearly understood only a temporary loss of surface revenue from mining activity; they referred to the market value of the affected timber. This term, "market value," would not have been used if permanent destruction or reduction of productivity of the land were foreseen; the liability would be immense, even after application of the most pessimistic discounts.

Therefore, it follows that the expressed liability of the mineral owner for "the market value of timber destroyed plus five dollars per acre" must now be interpreted broadly to encompass all present and foreseeable value

the Readers' Voice



identified with forests and the wildlife and wilderness they protect and define as well as public health and safety. NEPA does as much for the general human environment.

We would not now allow the Washington Monument or the coast redwoods to be overturned in the quest for mud to fill some unwanted ditch; their value is that much greater than the value of the mud. Have you ascertained the value of the Cranberry Backcountry as wilderness, water supply and wildlife habitat (of which there is so little of comparable quality) sufficiently to be able to say that the coal (of which there is so much of equal quality) is more essential to the public interest? What ever happened to the Cranberry-Williams Unit Plan to which I contributed testimony at a public hearing in Richwood on November 13, 1971? Would this plan not define the expected economic activity generated by use of the multiple renewable resources there? What steps are being taken to protect or to recover damages to these economic values?

What public discussions of the relative values of the Cranberry Backcountry for coal mining vs. wilderness of forest management have taken place? Have the necessary drainage and mining permits been applied for and/or granted? What were the results of your studies and your comments (to the Corps of Engineers and the Environmental Protection Agency, for examples)? Were environmental impact statements prepared?

Since the Cranberry Backcountry is one of the last remaining black bear breeding areas in West Virginia and has been declared a bear sanctuary by the West Virginia Department of Natural Resources, has the Endangered Species Act been complied with? What of the Wildlife Coordination Act?

I have a long-standing interest in wilderness preservation and public vs. private property rights as a former Wilderness Chairman of the West Virginia Highlands Conservancy, as an affiant in West Virginia Highlands Conservancy vs. Island Creek Coal Company (the Otter Creek defacto wilderness case), as a witness in Conservation Council of North Carolina vs. Albert C. Costanzo et al (construction of a marina at Bald Head Island) and as North Carolina Conservation Chairman, Joseph LeConte Chapter, Sierra Club. My great-great uncle, Nathaniel Pitt Langford, was first superintendent of the world's first national park.

Yours truly,
George Langford

510 Carriage Lane
Cary, North Carolina 27511
October 16, 1974

Editor:
THE HIGHLANDS VOICE

When I learned of the Cranberry's withdrawal from HR 13455 Eastern Wilderness Bill and the intent of the Mid Allegheny Coal Company to gut it, I was so upset I could not go to sleep until 2:00 A.M.

They are tearing down the mountain where I lived. Some of the best years of my life in West Virginia were highlighted by experiences on the Shavers Fork and the Cranberry. What a national outrage to let these areas be destroyed or degraded. Those are two of the greatest natural mountain river resources in the middle Atlantic states and man can never replace them.

How do I know? I've been in recreation, natural resource and state development planning for 20 years and have seen the most of 38 states during this time. In 1955 I served as West Virginia's first State Recreation Coordinator, and with the assistance of a very fine team, classified and listed the conservation priorities for West Virginia's natural resources of statewide and national significance.

The Cranberry and the Shavers Fork ranked near the top of the list of the top ten. I've walked all over and through both areas. The Shavers Fork was used in the 1967 double issue of Life Magazine "wild world" to sell the idea of a National Scenic River's System. In 1968, the National Scenic Rivers Act passed, but the Shavers Fork never made it. Why, because the short range economic interests of mankind are at work on it to destroy it, and the good citizens and leaders have not gotten sufficient

mind and perspective together to make the decision to save the things that make the state great and worthwhile place to live in and to visit. These are national resources, whose quality water supplies and natural recreation resources are treasures of the people, supposedly protected in the main by the public's investment in the Monogahela National Forest.

As to the qualifications for eastern wilderness, I have visited about half of the wilderness areas in the nation, and can assure you the Cranberry is well qualified for Eastern Wilderness Study Category and should be included in HR 13455. A Study might show some of the area suited as wild area for controlled timber cutting and wildlife management; but until such a study is completed, no additional roads and no mining should be permitted which will degrade the water quality, fishery resource, natural recreation and esthetics of the Cranberry back country. The Cranberry is the counterpart of the Cohutta's in Georgia, except that the Cohutta's has no coal under it. There is no reason why the people of West Virginia should accept a deed to destroy the birthright of the present and future children of the state to protect, use, and enjoy one example of their best rivers in wilderness.

The Cranberry is only 3/10 of 1 percent of the State of West Virginia! Are we that poor as a state and nation that we cannot preserve it?

As to the need for the coal there, we could delay that as a priority for another 100 years since we have an existing coal supply sufficient for 200 years. By that time, man will be using solar energy - which was the alternative conclusion I reached in 1953 when the first petroleum energy shortages were projected in **The Nation Looks at Resources** by Resources for the Future.

The Cranberry, managed as one of West Virginia's great wilderness recreation resources, is an economic resource of present and long-term benefit to the state and to the local people of Richwood, West Virginia. Wilderness areas, in the east particularly, serve as natural attraction magnets to state residents and out of state tourists who are attracted to the wonder and inspiration of wilderness. Many come, only to use its fringe for a day, then return to local private food and lodging accommodations at night. The problem of the resource manager is to design a proper plan for mangement with capacities for people to control the problem of overuse. Everyone must share the responsibility of litter and solid waste control by packing out what they pack in.

Wilderness serves other values by protection of: quality water supplies, key fish and wildlife habitat, outdoor education and scientific research. Would 5% of the state be too much for preservation of the best examples of the heritage of the state in natural, wilderness, and historic areas?

The 1964 Statewide Recreation Plan of West Virginia showed the Cranberry a special natural recreation resource to protect. I assume that policy still remains, since I believe it is a fact that West Virginia Legislature named the Cranberry River in the Monongahela National Forest a wild river in a state scenic rivers bill. It is evident the people of the state prefer that it be managed as a national wilderness area as they have worked toward that end since 1966.

The Cranberry has many justifications for inclusion in the study category of HR 13455, Eastern Wilderness Bill. I recommend by copy of this letter to appropriate Congressman that it be included and that haste be made to pass HR 13455 in November, 1974.

I also recommend that any attempt to mine coal in the Cranberry of the Monogahela National Forest require a full Environmental Impact Statement under authority of the National Environmental Policy Act; that citizens groups have input to the EIS; and be given opportunity to participate in public hearings to express their social, recreational, and environmental values inherent in the resource and its beneficial management.

Sincerely,
Lovell E. Greenhouse, Chairman
Planning Environment
Potomac Club Club

By Lowell Markey

The future of the Potomac River Basin and the role of the citizen in planning economic and political activities affecting the stream were discussed at a conference held Saturday, October 26, at Potomac State College in Keyser.

About 35 West Virginia and Western Maryland citizens attended the event which was sponsored by the Citizens Council for a Clean Potomac. It was the second such event held in basin this year, the first being held in January in Chambersburg, Pennsylvania.

Various speakers and discussions focused on the processes and methods citizens could use to have input into the planning and monitoring of governmental and industrial use of water in the Potomac basin.

The Potomac River drainage area has an unusual number of political jurisdictions - four states and the District of Columbia as well as numerous counties and municipalities. Nevertheless, the consensus of the group attending the Keyser conference was that basin-wide planning was necessary because many people, cities and industries along the river and its tributaries depend upon water for drinking, washing, cooling and other important processes. The effect of one user at the headwater can be felt by someone in the Chesapeake Bay area.

Paul Eastman, executive director of the Interstate Commission on the Potomac River Basin, listed the highlights of the 1972 amendments to the Federal Water Pollution Control Act. The main goal of this law is to eliminate the discharge of pollutants (sewage, industrial waste, etc.) into streams and rivers by 1985.

The law provides grants to states and municipalities for construction of water treatment facilities and for region-wide waste treatment planning. The law also requires that every discharger must apply for a permit from the Environmental Protection Agency. The permit application must include a plan for eliminating pollutants in the discharge.

It was also pointed out that the 1972 Water Pollution law allows for a tremendous amount of citizen participation. Citizens can get in on the first level of planning. For example, an individual or group can conduct research on the need for a waste treatment facility and on the advantages and disadvantages of a particular location for a plant.

David Faver, an attorney for several James River environmental groups, said that citizens can take governmental agencies or industries to court if it is felt that the law is not being upheld. Faver also stated that citizens need to exert their influence because governmental officials do not have the time or resources to seek public opinion on every issue.

John Hall, W.Va. Department of Natural Resources, said that the major problems of the Potomac Basin in West Virginia are acid mine drainage or nonexistent domestic sewage treatment. He looked to the Region Eight and Region Nine Planning and Development Councils to help solve the sewage problems in the Potomac Basin through planning and construction of waste treatment plants.

In addition to the North and South Branches the Potomac River Basin includes drainage from the Shenandoah and Monocacy Rivers, various tributaries from Pennsylvania through western Maryland, and Occoquan and Goose Creeks in Virginia. It joins the Chesapeake Bay at Point Lookout, Maryland. West Virginia counties in the Potomac watershed include Mineral, Grant, Pendleton, Hardy, Morgan, Hampshire, Berkeley, Jefferson and a small portion of Pocahontas.

The first conference held in January in Chambersburg drew 150 interested Pennsylvanians. Others will be scheduled later for Harrisonburg, Virginia and Washington, D.C.

In addition to Eastman, Faver and Hall, conference leaders included Ray Jones, Citizens Council for a Clean Potomac; William Shands, Central Atlantic Environment Center; Miss Lois Vermillion, Potomac Heritage Conference; Art Tenney, Keyser citizen, and Mrs. Carolyn Hoffman, West Virginia League of Women Voters.

(Continued from Page 1)

NORTH BRANCH POLLUTED

3. Island Creek Coal Company's active mines continue to pour in almost half the acid in the basin, despite the

4. Abandoned deep mines contribute only 5% of the acid.

5. Recently placed coal refuse piles are acid producers.

6. Strip mines have been operated since 1908 with little regard for water quality, and several continue to generate large amounts of acid. These include a strip mine worked as late as 1972 by Allison Engineering, and a recent permit of Allegany Mining whose bond has yet to be released.

This report is a serious indictment of both the adequacy and enforcement of West Virginia's water pollution and strip mining laws. Upcoming Federal help, backed by citizen enforcement provisions, will hopefully improve the situation. The report, entitled "West Virginia Acid Mine Drainage Study in North Branch Potomac River Basin," available from the West Virginia Division of Water Resources, 1201 Greenbrier St., Charleston, WV.

COALNOTES

FEDERAL STRIP MINING BILL

BY NICK ZVEGINSZOV

Your assignment this month is to keep the faith, and communicate with one or more of the House-Senate Conference Committee members listed below - Chairman Henry Jackson if you didn't write to him last month, anyone else if you did. Meetings of this Committee resume November 19.

Many issues have already been settled, for good or ill. One that remains is the disposition of Federal coal under private surface land - largely homesteaded land in the west. The Senate bill absolutely prohibited the mining of this coal (the "Mansfield amendment"). There is a strong and mixed coalition that supports this - ranchers and environmentalists in the west, and miners and environmentalists in the east. It is virulently opposed by the energy industry. The Conference Committee would dearly love to avoid this issue. Please make your view felt.

Otherwise the bill remains a regulatory bill with reasonably strong explicit standards on performance and public participation. It is not much stronger than existing WV law, but a national law with national standards will remove one more of the State's excuses for its miserably law enforcement of the current law.

Now, here is the membership of the Conference Committee:

SENATE INTERIOR CONFERRERS: Democrats: Henry Jackson (Wash.), Lee Metcalf (Mont.), Floyd Haskell (Colo.), Gaylord Nelson (Wisc.), and Bennett Johnston (La.). Republicans: Clifford Hansen (Wyo.), Paul Fannin (Ariz.), and James Buckley (NY.)

HOUSE INTERIOR CONFERRERS: Democrats: Patsy Mink (Hawaii), Mo Udall (Ariz.), John Melcher (Mont.), Teno Roncalio (Wyo.), John Seiberling (Ohio), and Joseph Vigorito (Pa.). Republicans: Sam Steiger (Ariz.), Happy Camp (Okla.), Philip Ruppe (Mich.), and William Ketchum (Calif.).

WE NEED YOUR HELP - PLEASE SEND LETTERS OR TELEGRAMS NOW - IT MAKES A DIFFERENCE!
[WVSTA NEWS - OCTOBER 1974]

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--Theodore Roosevelt

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6202 Division Rd.,
Huntington, WV 25706

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.

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