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Menacing Shapes In the Forest

by Skip Deegans

The Office of Surface Mining (OSM) has opened a public comment period on a proposed 16,248-acre coal mining development in the Monongahela National Forest. The proposal includes strip and deep mining along the Cranberry and Cherry Rivers and in the Cranberry Back Country.

The Cranberry Back Country provides some of the best outdoor recreational opportunities in the eastern United States. It provides excellent wildlife habitat, and the Cranberry River is prized by West Virginians for trout fishing. The environmental effects of mining, particularly increased sedimentation and acid mine drainage, could have a significant adverse impact on the natural resources in this area.

Strip mining and the surface impacts of deep mining are prohibited in the Monongahela Forest (MNF) unless the mining operator had valid existing rights to the coal or an adjacent mining operation to the coal when the Surface Mining Reclamation and Control Act was passed in 1977. Michael Hewitt, a Richwood coal operator and car dealer, Ellen Hewitt and Linda Lindsey have requested OSM to determine that they have legal rights to develop mines in the MNF. Citizens have an opportunity to comment on the proposal until April 9, 1990.

In anticipation of coal development by Hewitt, the U.S. Forest Service (USFS)

has tried unsuccessfully in past years to obtain Congressional appropriations to purchase the mineral rights in the proposed mining area. If OSM gives Hewitt the green light to mine, he will find the USFS divided in their position on whether strip mining should be prohibited in the MNF. Factions within the USFS, particularly at the top level, favor mining development as a legitimate form of multiple use. Many regional and local USFS personnel, however, take the position that strip mining and growing merchantable timber are not compatible uses of the forest.

The Cranberry development comes right on the heels of a similar scheme by State Senator Walter Helmick and Cecil Nichols, a Summersville coal operator, who want to strip mine over 1,000 acres in the MNF at Briery Knob. The Helmick/Nichols proposal received hundreds of opposing comments from citizens and state and national environmental groups. It is still under consideration by OSM.

WHAT YOU CAN DO. Send comments opposing mining in the MNF to Carl C. Close, Eastern Field Operations, Room 246, Ten Parkway Center, Pittsburgh, PA 15330 by April 9. Also, help is needed to ask West Virginia's congressional delegation to oppose mining in the MNF. Letters should be sent to Senators Byrd and Rockefeller and Congressmen Staggers and Rahall.

Top of the CHAIN

The Nature Conservancy, since its conception in 1951, has been characterized by a single-mindedness of purpose. The newly appointed director, Mark Scott, also may be characterized as possessing a similar single-mindedness. Familiar with the West Virginia chapter through his work as Director of DOE's division of Mines and Minerals, Scott is also a long time admirer.

A native of Pennsylvania, Scott received his masters in Planning and Public Administration from the University of Pittsburgh. His first position in West Virginia was with the office of Economic and Community Development in 1976. His career in government continued with service in the Department of Mines. From there he moved to DOE. Following the ten year plus term of Edward F. Maguire, the new decade began with Scott as Director of the West Virginia Chapter of The Nature Conservancy.



MARK SCOTT
Executive Director
West Virginia Nature Conservancy

Having no personal agenda to impose, Scott is anxious to make more people aware of the Conservancy and its activities. As a non-profit organization, fund raising is a vital component to continued success. Scott predicts the growing emphasis on biological diversity will become better defined together with the imbedded issue of self-interest. Nature as a source for new medicines, especially in tropical areas, is one example of biological diversity providing benefits for humankind.

Action based upon the best available scientific information gives Scott grounds for rejecting the notion that the Conservancy is a crisis manager. Besides, he plans to strictly apply the strategies used successfully for years. Approaching land owners as a perspective buyer (although a special one) or explaining how limited arrangements about the use of the land may provide the necessary benefits to protect a rare species. Scott supports the Conservancy's national policy that employs confrontational legal/political positions only in extreme cases. Such single-minded methodology has helped shape the image of the Conservancy as a positive force dedicated to the protection of a species for the benefit of the community. The negative perception of the lawyer with a green briefcase blocking development is not a specter around Conservancy projects.

The Border Islands Campaign (islands located in the Ohio River) will result in West Virginia's first National Wildlife Refuge. This purchase, funded by donations, will become a federal purchase managed by the Fish and Wildlife Service this spring. The Conservancy is also inter-

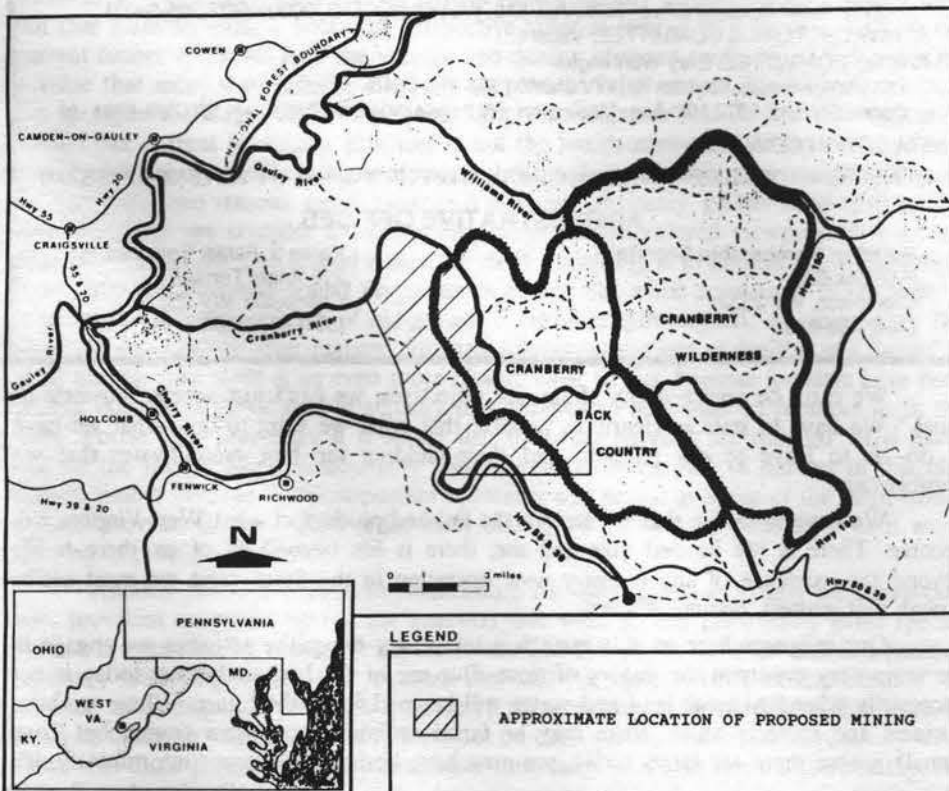
Many Points To Cover

Soil conservation, water quality management, pesticide management, animal waste utilization . . . technical assistance is available from the Soil Conservation Service for these land uses and all other comprehensive uses associated with the land or a farm with the possible exception of baseball. 1989 marked the 50th anniversary of the West Virginia Soil Conservation Committee and WV's fourteen (14) Soil Conservation Districts. From inception they formed local, state and federal relationships as unique as they are effective.

At the local level, Soil Conservation Districts work directly with town, county and regional leaders to assess soil and water conservation needs and establish a conservation program to serve the land users within the district. Each district has one or two elected supervisors from each county depending on the number of interested land owners and organizations.

At the state level, the West Virginia State Soil Conservation Committee (WVSSCC) provides administrative assistance to the soil conservation districts and

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National Soil And Water Stewardship Week

"Citizens of all Creation" is the theme for 1990 celebration set for April 29-May 7. A sample packet of materials may be ordered for \$2 from NACD Service Department, 408 E. Main, P. O. Box 855, League City, Texas 77574-0855.

— From the Heart of the Mountains —

by Cindy Rank

GROUNDWATER Why all the fuss?

This year's Legislative session has brought another round of heated debate about groundwater and what legislation we should/could/have to promulgate to protect this resource. All aspects of the legislation are being scrutinized but the matter of policy is one that concerns me most deeply.

The first step in creating any Groundwater Protection Legislation must include establishing some basic policy. Before considering whether or not standards should be set, what standards are to be set, who sets them, how they will be implemented, and so on, we must be clear about our direction. . . . We must ask ourselves: Just what is it that we want Groundwater Legislation to do? . . . What are our basic assumptions? . . . What are our goals?

We must give the legislation a heart, a soul,—a conscience, if you will, that keeps us focused, something that will remind us of our goals and direct our actions.

It's relatively easy for me to say what I want groundwater legislation to do: Where water, especially groundwater, is good we should keep it that way. Where our activities have the potential to pollute that water, we must prevent that pollution, or at least limit it to acceptable standards if prevention is impossible. And where we have already polluted we must work to clean it up.

I doubt that many people would disagree with these words. But our understanding of what those words mean, how we can live by them, what they oblige us to do, etc. may be quite different from one person to the next. Hence the need for any groundwater legislation to clearly state the intention, the goal, the policy of the State, and to develop a consistent and effective program to implement that policy.

Several sections of WV law already contain programs that address groundwater to some extent, but none are comprehensive enough to ensure consistency in dealing with the many activities that potentially impact our groundwater resources. What we have now is a fragmented approach to groundwater protection by a multitude of State Agencies with their own individual regulatory programs (i.e. Natural Resources, Energy, Health, Highways, Agriculture).

What we have begun to see and recognize over the past ten years is an increasing number of instances where contamination of groundwater has occurred and our fragmented state program is not capable of addressing the problem head on.

What we need is a bold step that acknowledges these growing problems, that defines a comprehensive policy and that establishes responsibility for our groundwater resources. We need to **recognize in statute the importance of groundwater**, and the importance of protecting that groundwater to the highest degree possible for us now and for future generations to come.

Of the groundwater bills considered by the current Legislature, House Bill 4100, introduced by Speaker of the House Chuck Chambers and Delegate Mike Buchannon, includes a policy statement that most directly speaks to these concerns.

The Governor's bill (SB 465) doesn't address the policy issue at all . . . there just is no statement of policy.

Senator's Sharpe's Bill (SB 412) espouses a policy to protect and maintain "reasonable" standards of quality and purity and in a later section allows for variances and exemptions from these standards "as appropriate"—There is no more guidance than that, no restrictions. It's wide open to abuse. Furthermore, future users and future uses of groundwater are neither mentioned in this bill, nor will they be protected by it.

The policy statement in HB 4100 specifically states the intention to maintain and protect groundwater "for present and future beneficial uses." It also provides for protection of existing quality where that quality is better than that needed for those uses. . . . It also allows for exemptions and limited degradation of that existing quality where an affirmative demonstration can be made that for economic and social reasons degradation should be permitted.

Prevention is the goal of HB 4100 and where prevention isn't altogether possible, standards are to be set to allow for limited and managed amounts of degradation. These standards will also then be used to guide cleanup where possible.

These are not pie in the sky goals. Nor will they bring industry in the state to a halt. Other states have similar non-degradation policies. . . . We're not talking about depressed states, but of Maine, New Hampshire, North Carolina, Montana, Michigan, Iowa and California. Implementation of strong groundwater policies is not curtailing development in those states and implementation of HB 4100 would not curtail development in WV either.

Admittedly the task before us all is not easy. No one state, nor the federal government, has the definitive answer on this one. But groundwater is important to us all for our health and overall wellbeing now and in the future.

Currently 53% of West Virginians depend on groundwater as their source of drinking water (in rural West Virginia the figure is 95% of the population) we have increasing problems with groundwater pollution; it is a limited resource; it is interconnected with surface water; and, therefore has an influence on the quality of our streams of rivers, especially during dry spells.

For these and a host of other reasons it is essential that we aggressively address the preservation, protection and enhancement of our groundwater resources before the problems overwhelm us entirely.

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We can't be wishy-washy about our objectives; we can't just accept "business as usual." We have to state as clearly as possible that what we want to do—what we have to do—is to leave to our children and their children the best groundwater that we possibly can.

We have to realize that we are not the finished product of what West Virginia will become. There is life beyond you and me; there is life beyond all of us; there is life beyond the existence of any industry now operating in the State—and we must act as though that matters, because it does.

Our existence here on this earth is a temporary thing; the activities we engage in are temporary events in the history of time. Our use of the land and water today is not necessarily what that same land and water will be used for in the future. Where we have business and industry today, there may be farms or homes tomorrow (remember Love Canal) where there are farms today, we may have homes tomorrow (unfortunately, it's
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Wilderness and Freedom

by Robert Stough

'Montani Semper Liberi,' translated 'Mountaineers are always free' is the state motto of West Virginia, emblazoned for all to see on the official seal. It is, as such things go, a rather appealing slogan, and even contains a kernel of truth, for one can indeed find real freedom in the mountain wilderness. The trouble is, however, that the freedom of those original mountaineers for whom the slogan was coined was wholly dependent upon the mountains themselves being free, not shackled with human 'multiple-usage' but left largely free to grow. Once the mountaineers became loggers and miners they also became virtual slaves, because they and the mountains that had given them their freedom were then subjugated in the name of industrial 'progress.' Thus the mountaineers were only free themselves to the extent that the mountain wilderness was free.

This may seem a rather arcane point of discussion in light of our contemporary problems, but in fact it is quite pertinent, because we have come again to a critical juncture in the natural history of the Allegheny Mountains, when the forests are at last beginning to recover from their first destruction, and are now scheduled for another, slower perhaps, but nearly as thorough. We must therefore decide in the near future whether to give a substantial part of the wilderness forests the freedom to continue to grow in peace or to destroy them again piecemeal in the name of forest 'management' and corporate welfare. In making these decisions we will also be deciding whether our regional culture will grow toward the light of real freedom or remain stunted in the deepening shadows of our consumptiveness, for one thing at least is clear regarding our relationship with the Earth: to the extent that we corrupt, exploit and enslave the Earth we do so as well to ourselves, and conversely the respect and consideration and freedom to grow that we give to the Earth is also what we give back to ourselves.

All this does not mean that we cannot farm some of the land, or cut some of the trees or extract some of the mineral resources, and it certainly does not mean that humans do not have a proper and useful place on the land, it simply means that, for our own well being we must establish large wilderness preservations in appropriate areas, mainly on public land in the mountains, that are defined by natural ecosystems, and **leave them alone**. This is something that in the West Virginia highlands we could do on many areas in the near future with very little short-term economic loss and almost inestimable long-term gain, because our economy would then have to be in much closer harmony with the natural world around us, if for no other reason than just because we could no longer lurch from one clearcut or strip mine to the next, but would have to take into account the ability of the 'multiple-use' land to truly sustain our activities.

One of the first steps in freeing the wilderness must be to specifically address the interconnected issues of logging, road-building and wildlife management on public lands, and that means essentially to admit to the real truth about what we are doing and why we are doing it. To begin with, the notion that long (70 years or so) rotation timber harvesting is basically sustainable is being discredited. This is especially true when an area is clearcut. Harvesting large, healthy trees creates an imbalance that appears to require literally centuries to correct. And the more timber rotations we subject a particular forest area to the more severe the degradation becomes. There is mounting evidence coming in from Europe that after the 3rd or 4th rotation once fertile forest soils have become so depleted that, combined with the stresses of modern industrial pollution, they can simply no longer support a healthy forest. As a result many European forests are either dying or in serious trouble, especially in the mountainous regions. So we need to start regarding timber cutting for what it really is, at least as we have been practicing it: a basically extractive industry. This is not to say that we have to give up harvesting timber or all the forests will ultimately die, but we do have to face up to the reality that 'industrial' logging is in fact **not** sustainable forever, and after acknowledging this fact we need to consider alternatives such as selective cutting using more benign methods, as well as leaving large tracts of forest alone as biopreserves, particularly mountainous areas that are being harvested only because of government welfare handouts to the logging companies.

Even from a purely economic standpoint, cutting trees at 70 years or so is very wasteful. It is true that many species growth rates generally slow down around that time, but true maturity from a botanical perspective takes at least 2 to 3 times as long as our current timber rotations. And the volume and quality of wood produced at 140 years has a value that more than justifies allowing the trees to fully mature. But the point here is not to argue for longer timber rotations, simply to illustrate that the driving motivation behind our current harvesting practices is not the health of the forests but the monetary profits of relatively small numbers of human beings. Trees are being harvested at 70 years for essentially two reasons; one is because it provides, obviously, greater short-term profits, although when we consider it from a long-range, Earth-centered viewpoint it is a very wasteful thing to do. The second reason for early harvesting is to prevent the development of old-growth. This may sound preposterous at first but when considered in the light of most forest managers opinion of old-growth it becomes quite logical. Anything over 100 years old is said to be 'over-mature', and any substantial amount of deadfall is a 'waste' of good timber. And there is an even more bizarre twist to this, because foresters have been finding out that a lot of people actually like old-growth and want to preserve it. In the MNF Forest Plan Summary it is stated that if timber harvests are reduced "it is likely that, in the future, public controversy will increase over the rate of harvest in this old-growth timber because of the important monetary and scenic qualities of the large trees". So that provides further incentive for early cutting, to prevent the trees from, as it were, growing in people's minds.

Another one of the frequent justifications for logging, and especially the below-cost sales prevalent on public land is the assertion that wildlife, and particularly game species habitat, is improved by cutting down the forest. The Forest Service even claims a positive monetary return on welfare sales because they will "produce wildlife habitat benefits" to the tune, according to their figuring of \$2.18 for every dollar spent. But recent work at Georgia, Clemson and Tennessee Universities on deer, turkey and bears, respectively have found that these primary game species make little use of clearcut areas when healthy, i.e. older forests are within their range.

So why cut the trees on most public land at all? It is clearly not profitable in a fair-market sense and it is becoming obvious that the supposed habitat 'benefits' are extremely limited to begin with and are gained, by regularly decimating the forest, at the expense of a balanced, climax ecosystem and the lives of many other beings that need such free systems to have healthy breeding populations. But there is another and more compelling answer as to why our public lands are being logged. Timber-cutting has become, quite simply, the main job of the Forest Service. It is not that they do not do other things, and some of them very useful things, but their real work, into which a substantial portion of their allocations are devoted is 'forest management', usually for the purpose of sooner or late cutting down the trees.

It is obvious that our public lands management policies are predicted far more on short-term economic profits rather than long-term ecological health and biodiversity. This is hardly surprising considering that the Forest Service must now justify virtually everything it does in terms of dollars and cents, as evidenced by the need to defend welfare logging by its wildlife 'benefits'. This should not be considered the fault of the Monongahela National Forest people however. The final forest plan represented a sincere attempt to meet the stated wishes of the people. We are very fortunate in having a good working relationship with the MNF, especially since many other NF units have a highly adversarial relationship with their residents and users. We must not, though, let good feelings blind us to the fact that **all** of the Forest Plans are seriously flawed because they attempt, in effect, to measure the worth of old-growth, climax ecosystems in short-range monetary or recreational terms.

As long as the Washington bureaucracy continue to dole out large sums of money to finance road building and logging the Forest Service will have to spend it. So one major area that we need to work on is legislation that would require forest managers to charge fair-market prices for all resources. This would result in the defacto preservation of a lot of public land that cannot be profitably logged and would also be far more in keeping with our economic principles that are supposed to reward initiative and creativity, **not** special interest groups who expend their energies lobbying for more and more handouts. Another crucial point is that we must stop considering climax ecosystems by strictly human economic standards and more by the standards of what is best for the health of the Earth (and ultimately our own species health) over long periods of time. When we do this the real value of stable, climax ecosystems becomes quite clear: a balanced plant and animal community in which all species are bound together in a nearly complete symbiosis that has almost innumerable benefits, including soil-building, erosion resistance, water and air purification, flood control, and not least the potential integration of human and natural communities in a truly sustainable fashion.

Current forest management policies greatly favor rate of growth above all else, as if this were the most significant determinant of the health of the forest. But the notion that a forest is mature when its growth rate slows around 70 years is as flawed as if we were to say that a human being is fully mature at 20. The true yardstick of long-term forest health is not growth alone but growth and decay, in other words a balanced system in which new growth is nourished by ample amounts of deadfall. Without substantial amounts of old-growth deadfall the so-called web of forest life can never be whole and complete, and is therefore, to continue the analogy, much weaker than it would naturally be, just as a spider's web with even a few broken connections is much weaker than one which is whole, because the web draws its strength and resiliency not so much from the individual strands as from all of the strands being woven together.

Of course it is true that there is now very little old-growth left in the West Virginia highlands, and it is also true that few humans alive today could possibly live to see old-growth throughout whole watersheds, because most people agree that it takes at least 150 years of freedom for an Appalachian forest community to even begin to resemble one that has been growing in peace for hundreds or thousands of years as the original forests did. So the question of the MNF now is not do we preserve old-growth, but do we give the forests the freedom to continue to grow or do we destroy them again in the name of forest 'management', and destroy as well any chance in the foreseeable future for the re-establishment of truly healthy ecosystems, and thus a truly healthy society. This is a very critical issue at this time because a considerable amount of MNF lands have been mostly left alone for an average of around 75 years since they were butchered by the robber barons. These extensive areas are now emerging from adolescence and beginning to establish relatively stable, climax ecosystems once again. Species once largely extirpated from the bioregion are beginning to return. The land is becoming healthy again. We simply must begin to protect a large percentage of these second-growth woodlands in any way that we can. We do not need the timber, or the roads, or the habitat 'benefits', or in fact **anything** that we would have to extract from the forests, but we do desperately need free healthy land if we are ever again to really have the kind of freedom that our slogans proclaim.

We live in a country that has, rightly, always placed a great deal of importance on individual freedom. Most people when put to the question say that they would die for freedom. Such sentiments are, at their roots, quite honorable. Unfortunately though, we have come to regard freedom as something that is directly related to material wealth. But real freedom cannot be bought and sold, as the often tragic history of the mountaineers so clearly illustrates, and in fact has virtually nothing to do with what we call 'economic' freedom. Individuals can only be free themselves to the extent that they give freedom to others. And the gift of freedom must be extended to all, not only all other humans but **All** beings with which we share this little blue planet. Those who use and abuse other beings, any other beings, solely for personal gain, are not free and can never be so, though they amass a fortune beyond imagination. Those who are free are those who take from the Earth only what they really need, and accord literally everything the deepest and most humble respect. Even poison ivy and mosquitoes are masterworks of the cosmos.

Earth Day

by Margaret Mead

Earth Day is the first holy day which transcends all national borders, yet preserves all geographical integrities, spans mountains and oceans and time belts, and yet brings people all over the world into one resonating accord, is devoted to the preservation of the harmony and nature and yet draws upon the triumphs of technology — the measurement of time and instantaneous communication through space.

Earth Day draws on astronomical phenomena in a new way; using the vernal equinox, the time when the Sun crosses the equator making night and day of equal length in all parts of the Earth. To this point in the annual calendar, EARTH DAY attaches no local or divisive set of symbols, no statement of the truth or superiority of one way of life over another.

But the selection of the March equinox makes planetary observance of a shared event possible, and a flag which shows the Earth as seen from space appropriate. The choice has been made of one of two equinoxes, the springtime of one hemisphere, the autumn of the other, making the rhythmic relationship between the two capable of being shared by all the people of the Earth, translated into any language, marked on any calendar, destroying no historical calendar, yet transcending them all. Where men have fought over calendrical differences in the past and invested particular days like May Day or Christmas with desperate partisanship, invoking their God with enthusiasms which excluded others, the prayers for EARTH DAY are silence — where there is no confusion of tongues — and the peal of the peace bell ringing around the Earth, as now satellites transform distance into communication.

Earth Day celebrates the interdependence within the natural world of all living things, humanity's utter dependence upon Earth — man's only home — and in turn the vulnerability of this Earth of ours to the ravages of irresponsible technological exploitation. It celebrates our long past in which we have learned so much of the ways of the universe, and our long future, if only we apply what we know responsibly and wisely. It celebrates the importance of the air and the oceans to life and to peace. On the blue and white wastes of the picture of Earth from space, there are no boundary lines except those made by

water and mountains. Yet in this picture of the Earth, the harsh impersonal structures of world politik disappear; there are no zones of influences, political satellites, international blocs, only people who live in lands, on land, that they cherish.

Earth Day is a great idea, well founded in our present scientific knowledge, tied specifically to our solar universe. But the protection of the Earth is also a matter of day-to-day decisions, of how a field is to be fertilized, a dam built, a crop planted, how some technical process is to be used to enrich or deplete the soil. It is a matter of whether the conveniences of the moment are to override provision for our children's future. All this involves decisions, some taken by individuals, some of national governments, some by multinational corporations, and some by the United Nations. Planetary housekeeping is not — as men's work has been said to be — just from sun to sun, but, as has been said, like women's work that is never done. EARTH DAY lends itself to ceremony, to purple passages of glowing rhetoric, to a catch in the throat and a tear in the eye, easily evoked, but also too easily wiped away.

Earth Day uses one of humanity's great discoveries, the discovery of anniversaries by which, throughout time, human beings have kept their sorrows and their joys, their victories, their revelations and their obligations alive, for recelebration and rededication another year, another decade, another century, another aeon. But the noblest anniversary, devoted to the vastest enterprise now in our power, the preservation of this planet could easily become an empty observance if our hearts are not in it. EARTH DAY reminds the people of the world of the continuing care which is vital to Earth's safety.

EPA JOURNAL, March 1978

The late Margaret Mead, internationally recognized anthropologist, educator, and activist in world affairs was the 1978 Earth Day chairperson.

Infant Innocence

The Grizzly Bear is huge and wild;
He has devoured the infant child.
The infant child is not aware
It has been eaten by the bear.

A. E. Housman



Old and New Titles

- A Forest Journey, The Role of Wood in the Development of Civilization; John Pertin
- A Sand County Alamanc, Aldo Leopold
- Americans and Their Forests, A Historical Geography; Michael Williams
- Biodiversity; edited by E. O. Wilson
- Changes in the Land, Indians, Colonists and the Ecology of New England; William Cronon
- Fluctuating Fortunes, The Political Power of Business in America; David Vogel
- From The Land; edited by Nancy P. Pittman
- Man and Nature or, Physical Geography As Modified by Human Action; George P. Marsh
- Perspectives in Ecological Theory; Ramon Margolf
- The Ages of Gaia, A Biography of Our Living Earth; James Lovelock
- The Gene Business Who Should Control Biotechnology; Edward Yoxen

What interest can there be in a list of the official flower, bird, and tree of the states of the United States of America? Research could determine the dates and arguments presented by legislators when the tree and bird and flower became a symbol. This could be of interest. Knowledge of the information chosen to influence the choice could be of interest.

There seems to be nothing that served as a guideline for each state's choice. Some species are native, some are not. Some are domesticated, some are wild. What qualifications were considered appropriate for the scientist called upon to deliver the official name and perhaps provide evaluation on the status of the choice? Were the criteria in Maryland different from the criteria in Kansas? Was one state more concerned with beauty and aesthetic values than another state? Were choices limited for the tree category and wide open for the choice of bird? Was recognition given by virtue of a ubiquitous presence? Did local folklore create an atmosphere that virtually excluded other contenders for the honor? (Is it even possible the tree, flower, or bird community were aware . . .)

Questions only multiply about this list. What state was really the first to designate an official tree? bird? flower? What is it in the choice of each state that holds symbolic value? Is the act of recognition symbolic? If the sagebrush is characteristic of Nevada and the rhododendron is characteristic of West Virginia and the poppy of California . . . what does an arrangement of all fifty blossoms (51 including the District of Columbia) symbolize? What aviary could contain a representative sample of the 50 birds listed? Could any arboretum display all 50 species? This list is symbolic in its symbolism.

STATE	TREE	FLOWER	BIRD
Alabama	Southern Pine	Camellia	Yellowhammer (flicker)
Alaska	Sitka Spruce	Forget-me-not	Ptarmigan
Arizona	Paloverde	Saguaro cactus blossom	Cactus wren
Arkansas	Shortleaf Pine	Apple blossom	Mockingbird
California	Redwood	Golden poppy	California Valley quail
Colorado	Colorado Blue Spruce	Columbine	Lark bunting
Connecticut	White Oak	Mountain laurel	American robin
Delaware	American Holly	Peach blossom	Blue hen chicken
Florida	Sabal Palm	Orange blossom	Mockingbird
Georgia	Live Oak	Cherokee rose	Brown thrasher
Hawaii	Kokui (candlenut)	Hibiscus	Hawaiian goose (nene)
Idaho	Western White-Pine	Mock orange (Syringa)	Mountain bluebird
Illinois	White Oak	Violet	Cardinal
Indiana	Tulip Tree	Peony	Cardinal
Iowa	Oak	Wild rose	Goldfinch
Kansas	Cottonwood	Sunflower	Western meadowlark
Kentucky	Coffee Tree	Goldenrod	Cardinal
Louisiana	Bald Cypress	Magnolia blossom	Brown pelican
Maine	Eastern White Pine	Pine cone and tassel	Chickadee
Maryland	White Oak	Black-eyed Susan	Baltimore oriole
Massachusetts	American Elm	Trailing arbutus (mayflower)	Chickadee
Michigan	Eastern White Pine	Apple blossom	Robin
Minnesota	Red (Norway) Pine	Showy lady's-slipper	Loon
Mississippi	Southern Magnolia	Magnolia blossom	Mockingbird
Missouri	Flowering Dogwood	Hawthorn	Bluebird
Montana	Ponderosa Pine	Bitter-root	Western meadowlark
Nebraska	Cottonwood	Goldenrod	Western meadowlark
Nevada	Single Leaf Pinyon	Sagebrush	Mountain bluebird
New Hampshire	Paper Birch	Purple lilac	Purple finch
New Jersey	Red Oak	Violet	Goldfinch
New Mexico	Pinon (Pinyon)	Yucca	Road runner
New York	Sugar Maple	Rose	Bluebird
North Carolina	Pine	Dogwood	Cardinal
North Dakota	American Elm	Prairie rose	Western meadowlark
Ohio	Buckeye	Red carnation	Cardinal
Oklahoma	Redbud	Mistletoe	Scissor-tailed flycatcher
Oregon	Douglas Fir	Oregon grape	Western meadowlark
Pennsylvania	Eastern Hemlock	Mountain laurel	Ruffed grouse
Rhode Island	Red Maple	Violet (unofficial)	Rhode Island Red
South Carolina	Palmetto	Carolina jessamine	Carolina wren
South Dakota	White Spruce	Sego lily	Sea gull
Tennessee	Tulip Poplar	Iris	Mockingbird
Texas	Pecan	Bluebonnet	Mockingbird
Utah	Blue Spruce	Pasque flower	Ring-necked pheasant
Vermont	Sugar Maple	Red clover	Hermit thrush
Virginia	Dogwood (unofficial)	Dogwood	Cardinal
Washington	Western Hemlock	Rhododendron	Willow goldfinch
West Virginia	Sugar Maple	Rhododendron	Cardinal
Wisconsin	Sugar Maple	Violet (unofficial)	Robin (unofficial)
Wyoming	Cottonwood	Indian paintbrush	Western meadowlark
District of Columbia		American beauty rose (unofficial)	Woodthrush (unofficial)



Earth Day Projects To Scale

SMALL SCALE

- Paint a globe on your trash can lid
- Join an environmentally conscious group
- Protect your health by exercise and diet
- Ride a bicycle
- Visit a gas station
- Visit a bakery
- Examine your energy bills; your water bills or wells
- Identify and enjoy natural places of beauty in your area

MEDIUM SCALE

- Restore degraded ground water to its natural state
- Rectify all hazardous waste sites
- Clean-up all leaking oil tankers and chemical transporters
- Pick-up all trash (in the Artic and in space)
- Encourage the preservation of biodiversity
- Prevent needless destruction of insects and predators
- Examine water sources and how they are distributed
- Eliminate sources of air pollution

LARGE SCALE

- Solve over population
- Manage industrial expansion
- Cease resource exploitation
- Determine total exposure of the environment to pollutants
- Examine interactions among different pollutants
- Identify where in ecological chain change will occur and why
- Track pollutants from point of origin and document form changes



FLOWER CLOCK CARLOS LINNEAUS

6 am	Spotted Cat's-Ear	opens
7 am	African Marigold	opens
8 am	Mouse-ear Hawkweed	opens
9 am	Prickly Sawthistle	closes
10 am	Common Nipplewort	closes
11 am	Star of Bethlehem	opens
12 noon	Passion Flower	opens
1 pm	Childing Pink	closes
2 pm	Scarlet Pimpernel	closes
3 pm	Hawkbit	closes
4 pm	Small Bindweed	closes
5 pm	White Water Lily	closes
6 pm	Evening Primrose	opens

The Earth Day 1990 regional office for Maryland, Virginia, Washington, D.C., and West Virginia:

James Day
c/o Podesta & Associates
424 C Street, NE
Washington, D.C. 20002
(202) 547-1990

To give or receive information about scheduled activities around West Virginia, contact Dianna Young, Department of Natural Resources, Room 669 Building 3 Capitol Complex, Charleston, WV 25305, (304) 348-3380.

EARTH DAY 1990 GREEN PLEDGE

Because... our planet today faces severe environmental crises such as global warming, rainforest devastation, rapidly increasing population and water and air pollution...

Because... the planet's future depends on the commitment of every nation, as well as every individual...

I pledge to do my share in saving the planet by letting my concern for the environment shape how I:

ACT: I pledge to do my utmost to recycle, conserve energy, save water, use efficient transportation, and try to adopt a lifestyle as if every day were Earth Day.

PURCHASE: I pledge to do my utmost to buy and use those products least harmful to the environment. Moreover, I will, to the maximum extent possible, do business with corporations that promote global environmental responsibility.

VOTE: I pledge to vote and support those candidates who demonstrate an abiding concern for the environment.

SUPPORT: I pledge to support the passage of local, state and federal laws and international treaties that protect the environment.

JOIN HUNDREDS OF THOUSANDS OF AMERICANS WHO ARE LETTING EARTH DAY 1990 KNOW THAT THEY ARE TAKING THE GREEN PLEDGE.

COMPLETE AND RETURN THIS REPLY COUPON TO EARTH DAY 1990 PO Box AA, STANFORD, CA 94309 (415) 321-1990.

NAME _____

ADDRESS _____

TELEPHONE _____

I ALSO WOULD LIKE TO SUPPORT EARTH DAY 1990 CAMPAIGN WITH MY CONTRIBUTION OF: \$10 \$25 \$50 \$100 OTHER



Federal Laws Relating to Biological Diversity Maintenance

COMMON NAME	RESOURCE AFFECTED
<i>Onsite diversity mandates:</i>	
Lacey Act of 1900	wild animals
Migratory Bird Treaty Act of 1918	wild birds
Migratory Bird Conservation Act of 1929	wild birds
Wildlife Restoration Act of 1937 (Pittman-Robertson Act)	wild animals
Bald Eagle Protection Act of 1940	wild birds
Whaling Convention Act of 1949	wild animals
Fish Restoration and Management Act of 1950 (Dingell-Johnson Act)	fisheries
Anadromous Fish Conservation Act of 1965 (Public Law 89-304)	fisheries
Fur Seal Act of 1966 (Public Law 89-702)	wild animals
Marine Mammal Protection Act of 1972	wild animals
Endangered Species Act of 1973 (Public Law 93-205)	wild plants and animals
Magnuson Fishery Conservation and Management Act of 1977 (Public Law 94-532)	fisheries
Whale Conservation and Protection Study Act of 1976 (Public Law 96-532)	wild animals
Fish and Wildlife Conservation Act of 1980 (Public Law 96-366)	wild animals
Salmon and Steelhead Conservation and Enhancement Act of 1980 (Public Law 96-561)	fisheries
Fish and Wildlife Coordination Act of 1934	terrestrial/aquatic habitats
Fish and Game Sanctuary Act of 1934	sanctuaries
Historic Sites, Buildings, and Antiquities Act of 1935	natural landmarks
Fish and Wildlife Act of 1956	wildlife sanctuaries
Wilderness Act of 1964 (Public Law 88-577)	wilderness areas
National Wildlife Refuge System Administration Act of 1966 (Public Law 91-135)	refuges
Wild and Scenic Rivers Act of 1968 (Public Law 90-542)	river segments
Marine Protection, Research and Sanctuaries Act of 1972 (Public Law 92-532)	coastal areas
Federal Land Policy and Management Act of 1976 (Public Law 94-579)	public domain lands
National Forest Management Act of 1976 (Public Law 94-588)	national forest lands
Public Rangelands Improvement Act of 1978 (Public Law 95-514)	public domain lands
<i>Offsite diversity mandates:</i>	
Agricultural Marketing Act of 1946 (Research and Marketing Act)	agricultural plants and animals
Endangered Species Act of 1973 (Public Law 93-205)	wild plants and animals
Forest and Rangeland Renewable Resources Research Act of 1978 (Public Law 95-307)	tree germplasm

Source: OTA, 1986

Scientists Test For Neutral Solution

Results of the National Acid Precipitation Program (NAPAP) will soon be presented to Congress. A week long conference in February at Hilton Head, South Carolina, was attended by about 700 scientists. The agenda, organized around 28 topics, gave the scientific community final opportunity to provide critical analysis to EPA. The final report goes to Congress later this year. (See Voice March 1989 for results of the National Stream Survey component.)

The ten year \$500 million program was mandated by Congress in 1980 to provide scientific descriptions of acid rain effects on the environment. Director, Dr. James R. Mahoney, opened the sessions with the observation that there is "a great deal of room, still, for debate and interpretation." Some scientists questioned the overall intent of the opening remarks as being a calculated effort to provide a safe middle ground. The politization of the acid rain issue virtually ensures opposite points of view. The latest consensus is based more upon the effects of acid rain as a political issue than a consensus that reflects the additional scientific evidence.

One scientist attending the conference reported a sizable minority valued the new research on forests and fish. They advise against definitive and binding interpretations when some of the data remains unevaluated. Examination in the professional forum did provide an opportunity for analysis. Even the best intentioned advice will likely be neutralized when the final report is written.

Some possible revisions of the previously reported belief that acidified streams recover many appear in the final report. The individual watershed capacity to recover from extended and repeated applications of SO₂ from wet or dry deposition is limited. In other words, treatment for recovery is not an option for many northeastern trout streams. The chain of nutrients required to sustain life is dissolved in extraordinary chemical reactions when the stream or lake receives repeated loads of acid.

Clarification on the effect of the proposed reduction limits was also listed as a potential component for a balanced report. Recent debates on the Clean Air Act are similar.

The region receiving the most acid rain — West Virginia, western Maryland, western Pennsylvania, and western New York, would require an immediate reduction of 75% of current pollution levels for fisheries protection. West Virginia and Pennsylvania estimate 25% of streams to be at risk not the 17% given in the National Stream Survey.

Other findings include:

* In the U.S., fewer than 1,200 lakes have become fully acidified. Little can live in them and acid rain is mostly responsible. This is about 4% of all lakes in areas where acidification might be expected. Earlier, it had been feared that thousands of lakes would be fully acidified by now.

* In the northeast, where most of the concern has focused, those lakes that are going to become acidified have already done so. An additional 5% of American lakes on which acid is thought to fall, while not necessarily fully acidified, are acidic enough to threaten some species of aquatic life.

* Except for red spruce at high elevations in the Eastern mountains, there is no evidence that acid rain has caused a general decline of American forests. Some scientists criticized this assessment as prematurely concluding acid rain is causing little harm to American forests. Canadian scientists charged that the assessment understated the problem in their country, a problem to which, it is generally agreed, the U.S. greatly contributes.

* There is no evidence that acid rain in the U.S. harms crops.

* Acid rain and dry acid particles in the atmosphere could pose a health risk to asthmatics, people with heart or lung disease, children and the elderly, either alone or in concert with other pollutants such as ozone. Acidic deposition might cause the chemical release in the environment of enough lead to affect health.

All in all, the peer review provided opportunity for critical analysis. Clarification and reduced uncertainties may be the two generalizations one can offer as the only undisputed result of the highly structured analysis applied by EPA scientists to delineate the acid rain issue. Given these scientific mea-

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Efficiency Works

Energy efficiency works. It appears also to offer one of the best opportunities for reducing the impact of global warming from the greenhouse effect.

The world has saved energy worth \$300 billion per year since 1973 when the price of oil escalated and forced energy planners to rethink their strategies.

The world now consumes the equivalent of more than 7 billion tons of oil in the form of fossil fuels every year: 42 per cent is oil, 34 per cent is coal and 24 per cent is gas. Hydroelectricity provides the equivalent of a further 524 million tons of oil, nuclear energy another 400 million tons, and biomass about 2 billion tons.

Because of energy efficiency improvement the US, which consumes a quarter of the world's fuels, the annual demand for energy is still below that of 1973 even though the country's gross domestic product, an indicator of economic activity, is up by 40 per cent.

Japan has gone one better. The country used, per capita, 6 per cent less energy last year than it did in 1973 even though its GDP grew, also per capita, by 46 per cent over the 15 years. The savings have further sharpened Japan's commercial edge, according to recent estimates which indicate that as a result of the country's low energy intensity — the amount of energy needed to produce economic growth — Japanese exports are 2 per cent cheaper than American ones.

These results have dispelled the myth that rising energy consumption runs hand in hand with economic growth. Without the improvements, we would now be burning the equivalent of an extra 1.4 billion tons of coal, and producing more than 3 billion tons of carbon dioxide, every year.

We waste around 60 per cent of the energy available as lumps of coal, crude oil, gas, and uranium ore before we

extract a useful service such as motion, heat, or light. Efficiency measures, such as the improved thermal insulation of buildings, better systems of heat recovery and recycling, and the development of more productive appliances work.

Buildings consume more than 40 per cent of the total demand for energy in most industrialized countries. In the northern hemisphere, three-quarters of the energy goes to heating space and water. Stricter building regulations, which set the maximum heat losses allowed through walls, roofs, windows, and floors, are part of the answer. Older buildings, however, need substantial renovation. Improvements must include thicker insulation, greater control of the heating systems and making buildings more airtight.

More efficient appliances, compact fluorescent lighting and advanced industrial motors are the other main areas for savings. The running cost of the least effi-

cient domestic appliance, such as a fridge or cooker, is almost three times that of the most efficient. With, an average, a kilogram of carbon dioxide being released for every kilowatt-hour of electricity produced from fossil fuel, the small losses in individual households quickly add up to an enormous waste of energy and cash — and more carbon dioxide production.

Environmentalists in the US expect tremendous results from the National Appliance Efficiency Standards Act, which came into force in March 1987. By the year 2000 they predict that the act, which requires new domestic appliances to meet stringent energy-efficiency standards, will be reducing electricity consumption by 53.5 billion kilowatt-hours per year. This fall in peak demand will make 22 large power stations redundant, reducing emissions of carbon dioxide by 50 million tons per year, or about 3 per cent of the volume released in the US. And

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SOIL/Continued from Page 1

sets state policy. Here activities for the 14 districts are coordinated. The WVSSCC is made up of the Agriculture Commissioner, DNR Director, Extension Service Director, Agriculture Experiment Director and three citizens appointed by the Governor. The State Conservationist for the Soil Conservation Service is an ex officio member of the WVSSCC.

At the federal level the USDA Soil Conservation Service (SCS) provides technical expertise. SCS conservationists work directly with landowners to draft conservation plans for their property and provide necessary agronomic and engineering assistance to implement the plans.

Federal laws and programs, state laws and programs and local land use practices determine the needs for each district. Specific concerns expressed at the local level may be addressed locally while being integrated into the bigger picture. Thus, the WVSSCC, the districts and the SCS combine living traditions based on ties to the land with the shared concerns of all land users.

Non-point Source Grant

The strong grassroots network was recently tapped for a non-point water pollution source evaluation and proposal coordinated by DNR. Structured according to EPA guidelines, a management plan for non-source pollution was submitted for 1990. The categories of silviculture and resource extraction were compiled by the Department of Commerce and Department of Energy.

The construction and agriculture categories evaluated by the WVSSCC and the 14 Soil Conservation Districts identified the most serious aspects of non-point pol-

lution in West Virginia as sedimentation and pesticides and nutrients (chemical and natural fertilizers) application. Competition for funds within an EPA designated region found West Virginia successful in its application for funds. Lance Tabor, Executive Secretary of the WVSSCC expects monies to be available this summer.

The management plan submitted outlined project plans by district for the first year based on a four year program. A five part strategy provides for education, technical assistance, financial assistance, research and regulation. Given any success, implementation of this strategy will allow continuing benefits for land users long after the grant funding is depleted.

In the proposal, Cedar Lakes will serve as document and information repository and technical training center. Aspirations for an ongoing demonstration project at Cedar Lakes are high. Education and increased community awareness about non-point pollution and corrective and preventive measures is a goal emphasized by EPA. Other federal program strategies may be applied. Some have become recognizable management strategies: integrated pest management, best management practices, erosion control and alternative farming techniques. All of these methods emphasize preservation and encourage a common sense approach based on local attributes and characteristics.

Projected users of the training center include urban developers, loggers, farmers, earthmoving contractors, resource extractors, and consulting engineers. Non-point source water pollution problems of gravest concern include control of sediment pollution from urban development, timber harvesting, surface mining, and animal waste disposal.

Lack of a statewide sediment control and erosion laws severely effects enforcement. Continuing legislative efforts are needed if projects like this are to have an impact. Identification of the most troublesome problems found in each district reinforces a positive connection between available technology and land use practices.

For more information contact your local Soil Conservation District, Soil Conservation Service office or the West Virginia Conservation Committee, Guthrie Agricultural Center, Charleston, WV 25305, (304) 348-2204.

Celebrate Earth Day

The 20th anniversary of Earth Day falls on the first day of National Volunteer Week, April 22-28, 1990. An excellent way to celebrate both occasions would be to join the Earth Team. The Earth Team is the name given to volunteers who donate their time and talents to the USDA Soil Conservation Service (SCS).

More than 100 Earth Team volunteers throughout West Virginia worked a total of 3,628 hours last year. This service to the state's SCS and Conservation Districts is valued at more than \$29,000.

Anyone over the age of 16 can volunteer on various projects and activities such as entering computer data; taking photos; writing news articles; setting up workshops, field days and conservation tours; filing; making and staffing displays for fairs, festivals and other events; answering the telephone; showing conservation slide shows to elementary students; establishing outdoor classrooms; and surveying and designing conservation practices such as ponds, spring developments and diversion ditches.

"In fact, there are very few jobs with SCS or conservation districts that volunteers have not done," says Peg Reese, state coordinator for SCS volunteer services.

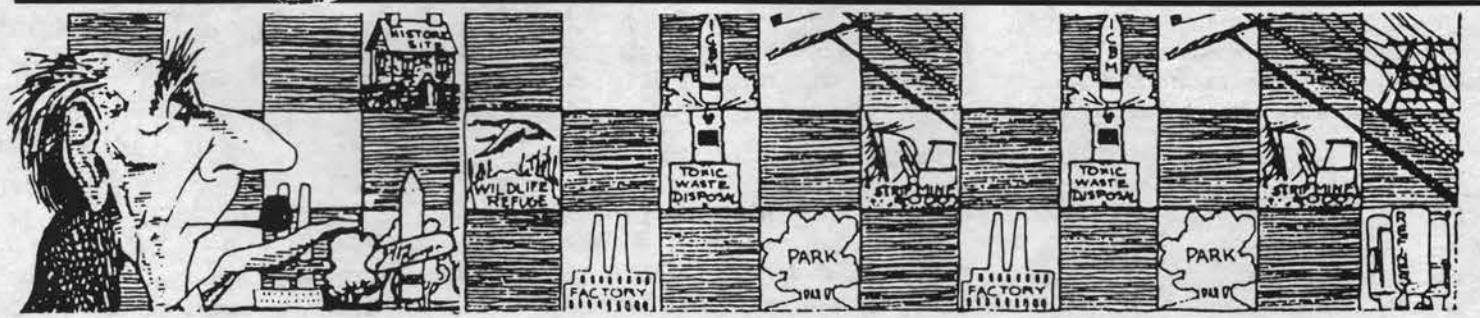
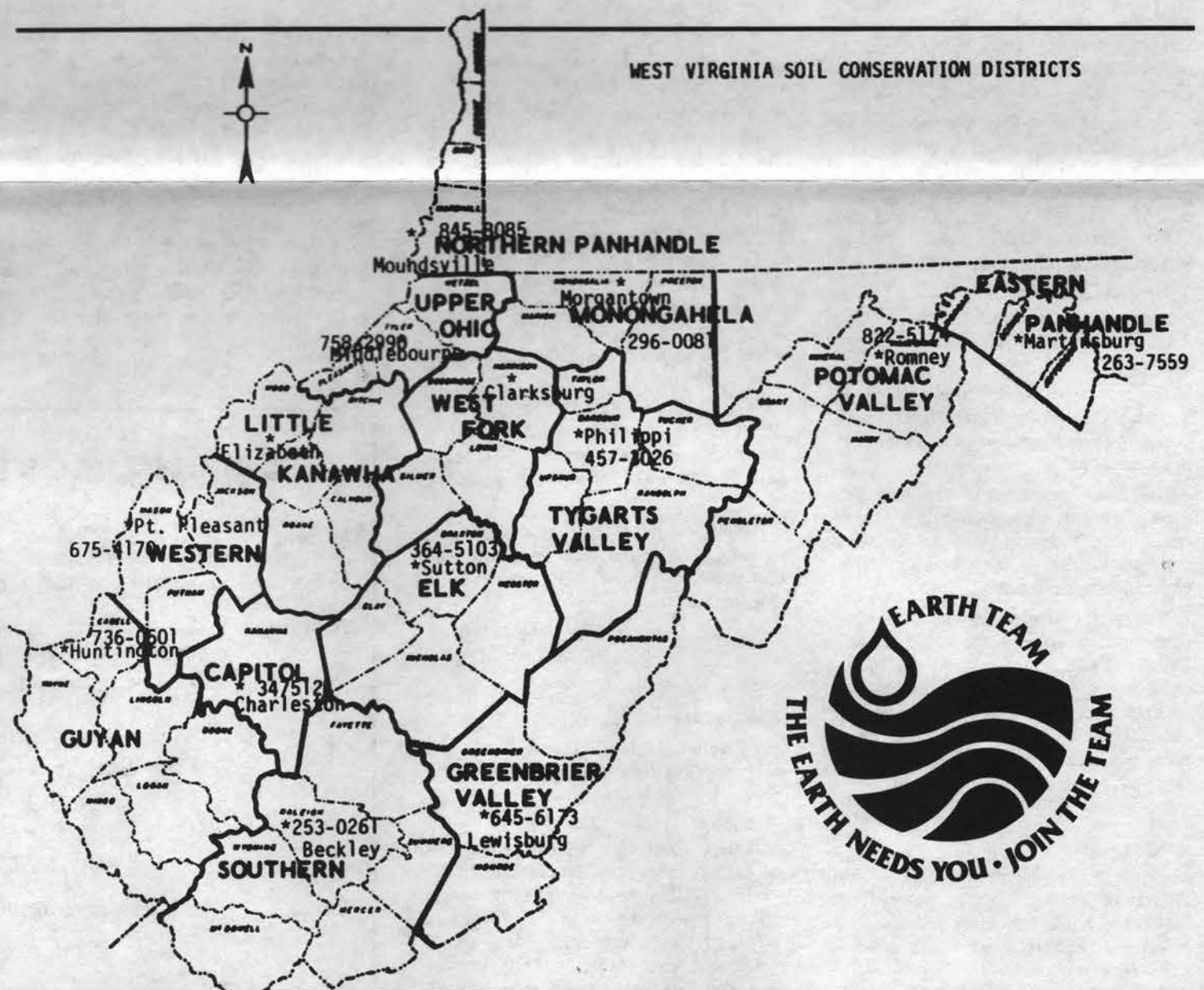
"Earth Team volunteers receive coverage for tort and injury claims while on the job, and have their contributions made part of a permanent work record," Reese stated, "but perhaps the most valued benefit is the knowledge that they have helped conserve our soil and water resources for future generations."

Anyone interested in joining Earth Team should contact their local SCS office or call 1-800-THE-SOIL.

(Continued from Page 6)

asures of the effects of fossil-fuel driven pollution, the conversion into public policy remains as the congressional task.

- Emissions Involved in Acidic Deposition Processes
- Atmospheric Processes Research and Process Model Development
- The Regional Acidic Deposition Model and Engineering Model
- Evaluation of Regional Acidic Deposition Models
- Deposition Monitoring: Methods and Results
- Air Quality Measurements and Characterization for Effects Research
- Relationships Between Atmospheric Emissions and Deposition/Air Concentrations
- Current Status of Surface Water Acid-Base Chemistry
- Watershed and Lake Processes Affecting Chronic Surface Water Acid-Base Chemistry
- Historical Changes in Surface Water Acid-Base Chemistry
- Episodic Acidification of Surface Waters Due to Acidic Deposition
- Biological Effects of Changes in Surface Water Acid-Base Chemistry
- Methods for Forecasting Future Changes in Surface Water Acid-Base Chemistry
- Liming Acidic Surface Waters
- Changes in Forest Health and Productivity in the United States
- Responses of Vegetation to Atmospheric Deposition and Air Pollution
- Effects of Acidic Deposition on Materials
- Materials Damage in Structural Context
- Distribution of Materials Resources Sensitive to Acidic Deposition
- Direct Health Effects of Air Pollutants Associated with Acidic Precursor Emissions
- Indirect Health Effects of Acidic Deposition
- Visibility: Existing & Historical Conditions — Causes and Effects
- Technologies and Other Measures for Controlling Emissions: Performance, Costs and Applicability
- Methods for Modeling Future Emissions and Control Costs
- Methods for Valuing Acidic Deposition and Air Pollution Effects
- Development and Use of Tree and Forest Response Models



'Mission Earth' Captures On Film Threats To Our Environment

by Monty Fowler

The golden dome on West Virginia's Capitol poked through the yellow-white vapors filling the Kanawha River Valley as a toxic waste pond gleamed dully in the early morning sunshine.

It was one of many waste ponds tucked up in the hills and hollows around Charleston, all but invisible from the ground, but showing up clearly, like a pollution-inspired patchwork quilt, from the air.

West Virginia's environmental problems are not always obvious from the ground — coal mines hide in remote folds of the hills, waste dumps can be far from the nearest homes, and industries sometimes pipe their leftovers miles away to "treatment" ponds that are sometimes nothing more than glorified toxic waste dumps.

On a recent flight up and down the Kanawha River, within a 40-mile radius of Charleston, local environmentalists pointed out some of the problems to a photographer on assignment for a book publishing company.

The same company that did "A Day in the Life of America" is now working on a similar book, called "Mission Earth," and photographer Wally McNamee came to West Virginia to document the environmental threats with pictures.

He was at the E-Day rally Monday in the Capitol rotunda and later that day went to a rally outside Rhone-Poulenc's plant in Institute, W.Va., where they make methyl isocyanate, the same chemical that killed more than 3,200 people after an accident in Bhopal, India, in 1984.

"It had a lot of flavors to it," McNamee said of the Institute rally, "There was almost an innocent quality, and some pungency."

His comments were more pointed on Tuesday, when Richard DiPretoro, a geologist from Morgantown, took him up in his small plane.

DiPretoro, a member of the West Virginia Highlands Conservancy and Mountain Stream Monitors, has seen the scars that man has left on the Mountain State's environment many times.

"It's pretty depressing, but I'm pretty used to it because I see it so much," DiPretoro said, after spending the morning flying McNamee over the brown scars of strip mines, the checkerboard grid of chemical plants, Superfund toxic waste sites, old dumps, oily-looking chemical disposal ponds and multicolored waste lagoons.

"We're setting ourselves up for long-term pollution problems in this state," said DiPretoro, a 19-year state resident who has locked horns frequently with the coal industry over water quality and ground-water issues.

"I just see a blight on the future of the area when I see things like that," DiPretoro said, after a two-hour tour of what local residents call Chemical Valley.

The tour guide was Norm Steenstra, environmental coordinator for the West Virginia-Citizen Action Group, who as a former coal miner knows what to look for in coal mining reclamation and hazardous materials handling.

The tour, despite the rolling hills and lazy green river below, was not always pretty and was frequently depressing.

Circling around the giant coal-fired John Amos power plant at Poca, Steenstra pointed down to bright-orange puddles of acid water in the coal storage area.

And next to the plant, the man-made reservoir used to dispose of fly ash from the smokestacks glowed an unnatural fluorescent green in the center, fading to a creamy green along the edges.

McNamee snapped many pictures of the Artel Chemical Corp. Superfund site in Nitro, one of the United States' worst toxic waste sites, as he noted how close it was to the town itself.

At one point the small plane circled a house at the end of a hollow east of Charleston.

"See that house down there, the white one? That's the lady I told you about. Every time that pond overflows, it gets in her well and ruins it," Steenstra said, gesturing to an orange-brown mine tailings pond formed where the creek above the house was dammed off. Mines dotted the hills above the hollow.

The most striking thing McNamee noticed, though, was the air.

"I've never been in a place where you could see the air before," he said, as the plane flew low over the man-made mist that filled the Kanawha Valley from bank to bank, the product of industrial plants, cars and other sources.

The haze was almost solid from Belle downriver past Nitro and Dunbar, and McNamee noted the Capitol's gold-gilded dome was barely visible above it as he asked DiPretoro to bank the airplane for another picture.

"Our slogan for this election is going to be, 'Don't let them do to you what they did for the Kanawha Valley,'" Steenstra said, referring to the May primary elections.

"We're chipping away at environmental protection in the state right now," he said earlier, "and we don't have time to chip."

*The Herald Dispatch
Sunday, January 28, 1990*

(Continued from Page 6)

yet governments have become complacent as fuel prices have dropped, slowing the progress of energy efficiency.

Perhaps the key challenge in policy-making is to change popular perceptions, or rather misconceptions, about energy saving. Rather than associating energy efficiency with the notions of "switching off" and "wrapping up," people should see it as a characteristic of high technology and advanced social and industrial systems. Nations are getting "more from less." That's one form of growth that the planet desperately needs.

Stewart Boyle

Energy and Environment Programme Director, Association for the Conservation of Energy, Author of *The Greenhouse Effect: A Practical Guide to the World's Changing Climate*, New English Library.

Submitted by Donald C. Gasper

(Continued from Page 1)

ested in Canaan Valley. The complex development history resulting in a patchwork of ownership is a partial explanation for the Valley's continued status as an area to be monitored.

The 20th anniversary of E-Day, under the motto "EARTH DAY EVERY DAY" will be celebrated by the simultaneous chapter announcements of an acquisition. As a part of a larger region, the bulk of the legal research and preparation for the WV Chapter is done in Boston. Solid organizational support and smooth operations between national and local chapters free Scott to focus on administrative duties.

The gaps Scott has identified include a deficiency between data needed and data available. The 28,758 acres listed as saved

in the winter newsletter doesn't include enough of West Virginia to end consideration of further additions. Additional personnel, especially with technical expertise, could be immediately absorbed.

Acknowledging the traditions to first establish stewardship as a guiding concept in development of national and local policy furnishes an honorable measure for new contributions and future acquisitions: The Heritage Program is West Virginia's principal means for the identification and preservation of rare species. In cooperation with DNR, continued maintenance of the valuable data already gathered, together with the ambition to collect more data will be a fulfillment of the Conservancy's goals. Scott mirrors these goals by giving direction to the preservation of West Virginia's biological diversity.

(Continued from Page 2)

happening all around us) where there is nothing but woods today, even the most remote holler in the most remote county in the state, we may have homes tomorrow . . .

Whether today we use the earth's resources as a small business owner, or as a corporate entity or a large industry, or as a farmer, or as an individual homeowner we must provide for future generations to have the fullest use of these resources. Where groundwater is involved, we should leave it clean enough to drink without treatment if that is at all possible. And we should make it an explicit matter of law that that is what we intend to do.

★★★★★★★★★★★★★★

While discussing these matters the other day a friend reminded me of the following appropriate comment from E. F. Schumacher's *Small Is Beautiful (economics as if people mattered)*. ". . . Any society can afford to look after its land and keep it healthy and beautiful in perpetuity. There are not technical difficulties and there is no lack of relevant knowledge. There is not need to consult economic experts when the question is one of priorities. We know too much about ecology today to have any excuse for the many abuses that are currently going on in the management of the land . . . If we permit them, this is not due to poverty, as if we could not afford to stop them; it is due to the fact that, as a society, we have no firm basis of belief in any meta-economic values, and when there is no such belief the economic calculus takes over. This is quite inevitable. How could it be otherwise? Nature, it has been said, abhors a vacuum, and when the available 'spiritual space' is not filled by some higher motivation, then it will necessarily be filled by something lower—by the small, mean, calculating attitude to life which is rationalized in the economic calculus."

Spring Review Preview

When: May 11-12-13

Where: Camp Rimrock (near Capon Bridge)

Activities: Canoe Trip. Cacapon River (5 hrs.)
Tour Pine Cabin Run Ecological Lab
Visit Site of Proposed Lost River Dam

Speakers: Mario Palumbo (candidate for Attorney General)
Sally Shepherd (Chair, Kanawha Co. Solid Waste Authority)
Dr. George Constanz (founder, Pine Cabin Run Ecological Lab)

Cost: \$30.00/person includes 2 nights lodging at Camp Rimrock plus 3 meals

**Brochures and Registration Forms Will Be Mailed Soon.
More Details In April Voice.**

Call in Advance For Canoe Reservations.

Carroll Jett

Route 1, Box 22

Sherman, WV 26173

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