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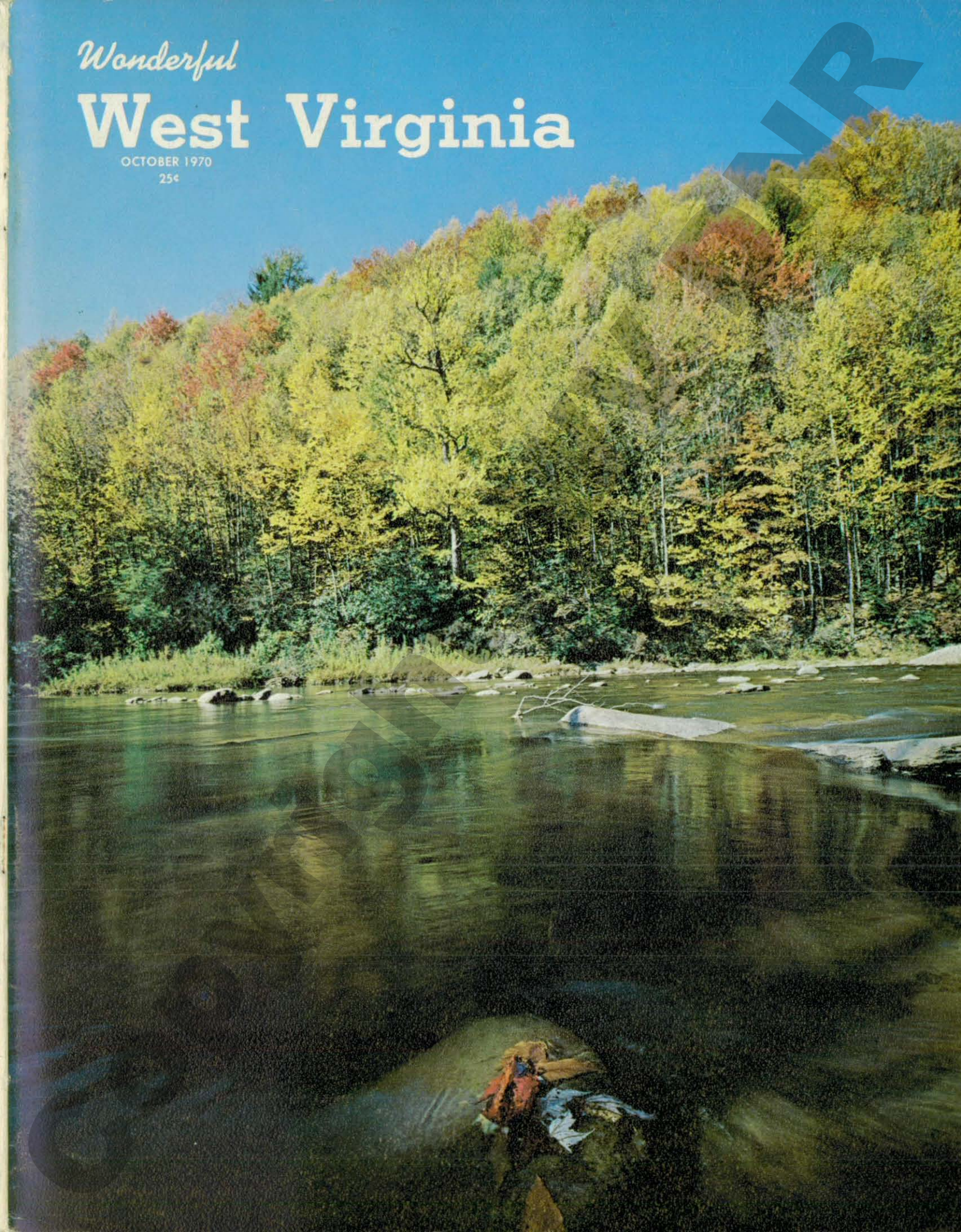

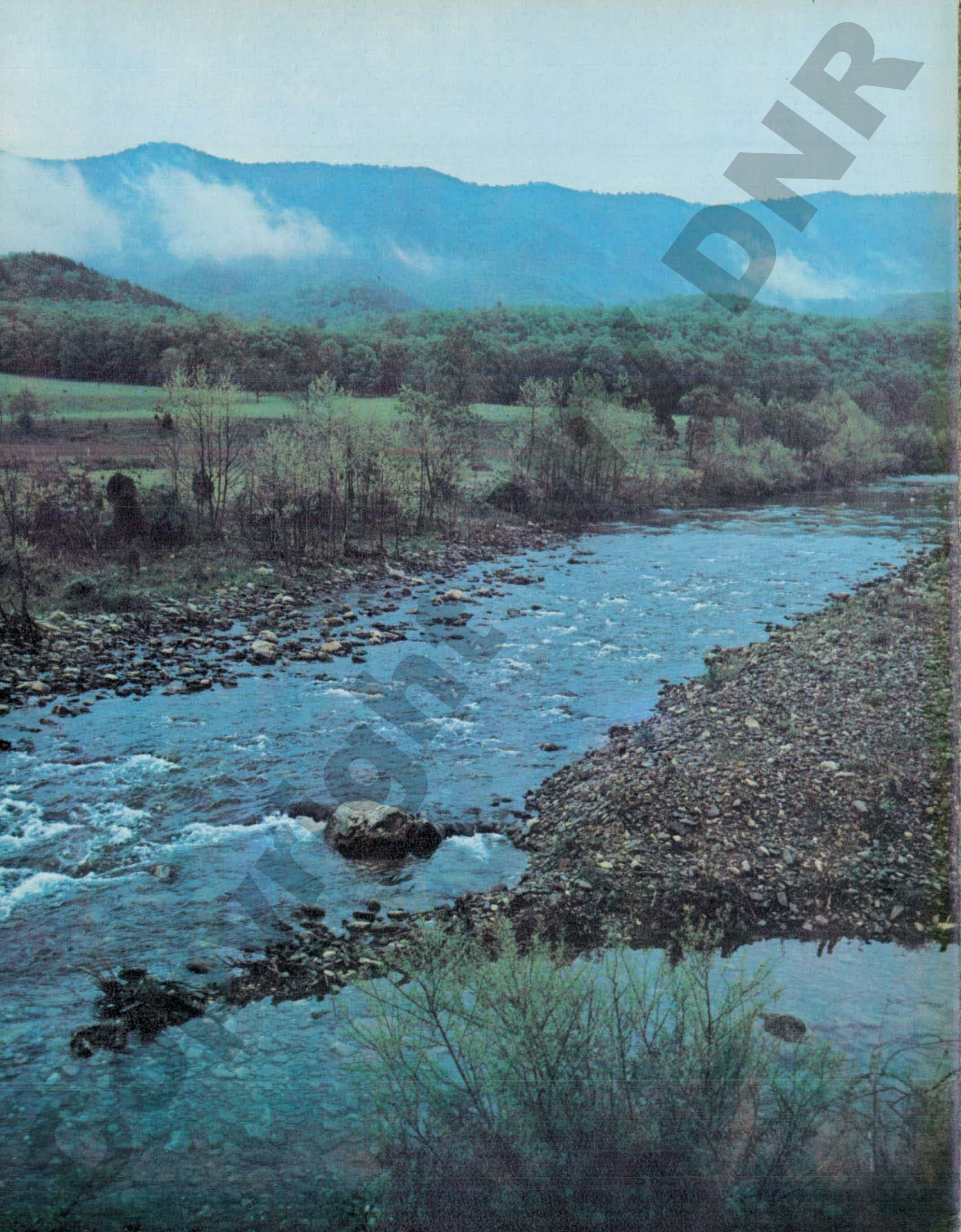

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South Fork, South Branch of the Potomac near Moorefield delights whitewater canoeists in spring, too.
ARNOUT HYDE JR.

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Know the Gray Fox

EDWARD L. JOHNSON
Naturalist—The Greenbrier

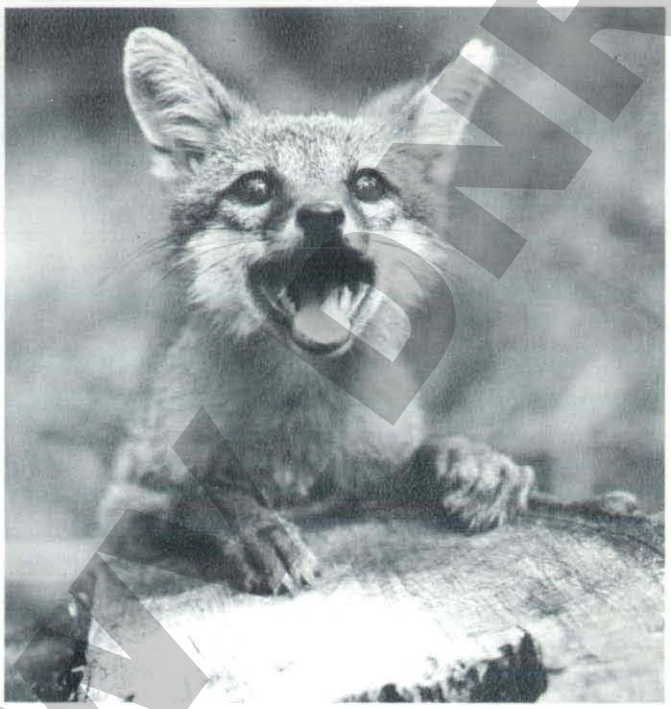
LIKE monstrous rolling drums, mellow yet meaningful, the voices of the hounds came to us, sifting through great stands of snow-draped oak and hickory that climbed sharp up the steep mountain face where daughter Becky, son Mike and I were grouse hunting that crisp December morning. We knew at once that the pursuers were a pair of black and tans that belonged to a neighbor, and we were soon to reason that the pursued was a gray fox, rather than a red, since it refused to leave timbered haunts, or to make off across rolling mountain chains that swept away to the north and west.

Twice the chase swung about us, almost as precisely as though it were coursing a giant racetrack, following first the foothills, then cutting in behind the peak at the southern tip of the mountain to vanish briefly out of hearing. Then, like an exploding jack-in-the-box, the bugle-edged bellow of the hounds would burst over the mountain crest in back of us and plummet with unbelievable speed down to the foothills again.

On the third trip the fox did not drop down. Somewhere around that cold and snowy trail a clever ruse had failed to shake the hounds, and, as it turned toward us, the black and tans were pushing him hard. We could read the situation readily from their heated tonguing.

Before we were aware of his nearness, the fox was angling down the steep slope above us. When its course appeared well lined to the game trail that swung around our level, he whirled. The action was so sudden that it seemed almost as though he had turned in mid-air. When Reynard's feet touched ground again it was not only pointed straight up the hill, but had landed beyond the trunk of a huge fallen chestnut where his trail in the snow would not be visible. Another great bound drove the creature onto a small sandstone outcrop. Then it loped away, running swift and easy, its brush still high in the true fashion of the proud and haughty creature that he was.

BRIEF MINUTES passed and then the hounds came charging down the same incline, their voices ringing through the woods about us like silver bells. They drove past the turnoff and hit the game trail there ahead of us before they realized the loss of that hot, sweet scent. Instantly they parted. One swung right, the other left, and in minutes they had cut the trail on the hump above us and were singing again. Yet we knew those few minutes had gained the fox sufficient respite that he was probably two ridges away by now.



U. S. Fish & Wildlife Photo.
Half-grown gray fox.

We reasoned that the fox, which we thought to be the old dog that denned with his vixen in an ancient crater well out across the fields that swept away from the foot of Flat Mountain, had been too hard pressed to attempt a dash across the open. We now expected the hounds to turn down the mountain. This time we guessed wrong.

As we stood there, caught up by the excitement of the chase, we saw the fox sweep down the slope again, threading his own previous trail. This time, however, just before he reached his former turnoff, he wheeled and leaped down the hill onto the fallen trunk of an old locust that nearly spanned the width of the bench where we waited. When he reached its tip, those springs that he walked around on suddenly exploded. He sailed up and out, like a rocket from its launching pad. When he hit the slope again, now out of sight, we heard him bound away.

Within minutes the hounds were back. This time when they lost the trail they turned instinctively up the hill and again cut the old trail. Possessing good breeding and much experience, they immediately realized the loss of the fresh trail. They cast about, then picked up the new course and bellowed down the mountain.

WE CLIMBED QUICKLY to the jutting ledge that the fox had used in his first escape. From here we could see the open fields in the valley below. Soon the fox came out of the woodland, like a gray shadow floating on the snow-whitened landscape. He leaped through the wire fence that formed the line between our old homestead and our neighbor. He swung wide, then back, and again he leaped through the fence. Seven times we watched him cross the fence in that half-mile to the country road. He then turned out the road fence and followed it through the meadow to the crater, where he sat down, turning his attention now to the hounds that had broken out of the woodland and were dashing through the fence first one way and then the other.

In apparent amusement the fox watched until the lead

Waterfowl, too, are attracted to mountain beaver ponds like this one in Tucker County.
JERRY RATLIFF

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hound was within a hundred yards before he stood up and yapped a short, sharp note that set the hounds to baying wildly. As they closed the narrow gap he slipped over the lip of the crater and was gone like the soft shadow of a cloud.

Thus the old gray, which had denned unmolested for years there within two hundred yards of our farm home, had proved once again that the gray fox can be just as cunning and just as elusive as his red cousin.

True the gray does not have the endurance of the red, and maybe not the same love for the chase. Yet those who look upon him as a creature short on cunning and skill is not well acquainted with the mountain gray. He is one of those few wild creatures that have, on their own and with protection from no source, meshed into civilization, survived and multiplied.

Little could befall the fox that has not already come his way. In addition to his fur, once highly prized, there have been bounties of one kind or another in almost every area of the country. When it begins to multiply, the animal is beset by angry rabbit and grouse hunters, or by epidemics of rabies. It has been hunted, trapped, chased and poisoned since civilization first encompassed his range, yet his alert and crafty brain keeps him around.

THE OLD CRATER, referred to earlier, has been under ownership of our family for over fifty years, and never during that period of time have those cavernous dens been without at least one family of grays, usually several. We found, there on the farm, that when the fox population goes down the rodent population goes up. After a rabies epidemic the rats nearly take the place.

The gray raids an occasional bird or rabbit nest, yet catches few healthy adults. Of course it does take some, often by applying some unique or unusual strategy.

On one such occasion we were following a fox trail along a row of corn shocks, when suddenly the trail divided, with one set of tracks passing around either side of a shock. We knew then that we were on the course of a hunting pair, which is not uncommon in the fox family, for the fox mates for life. He is a devoted mate, hunting for and fighting for both his vixen and their offspring.

After leaving the cornfield, the pair had paused for some time between two brier thickets at the foot of the mountain. After considerable prancing in the snow, one had moved out the path and crouched behind a stump about halfway between the thickets. This we guessed to be the vixen.

The old dog had dropped back and moved in a wide circle that covered more than a mile of trail before it carried him in to the back of the thicket there before his mate. He had startled a rabbit, as apparently planned, and their trails in the snow indicated that he had pushed the quarry hard, covering the ground in monstrous bounds, bearing hard to the mountainside to make certain that the rabbit held to the path out past the waiting vixen.

Just which fox made the kill, we could not tell. The vixen had come out in a great leap that carried her square into the path of the approaching rabbit. All that remained was a patch of trampled snow and a few bits of fur and blood.

GRAY FOXES, like all animals, possess varying degrees of intelligence.

There was one particular old gray dog, back in the days when fox pelts carried a premium, that caused us considerable grief for the greater part of two trapping seasons. Back then, when every farm youngster was an amateur trapper, along with a number of professionals, the fox that survived soon became extremely trap-wise. I am of the opinion that hunting parents, particularly those that have become trap-shy, instill a fear of metal objects in their offspring. Anyway, it was not unusual to find a fox that was nearly impossible to nail.

My older brother, Joe, and I were running a line that year when we encountered the old dog gray that we were to later name "Three Toes," because of a missing toe on the right front foot. Our first introduction to him was at a well-planned set where we found the traps snapped and dragged away from the set. There was no hair in the traps, but, since

Gray fox is excellent tree-climber, as shown by author's photo.

the bait was gone, we reasoned that we had pinched him lightly.

A week later the same thing happened again, this time less than a quarter-mile around the mountain from the first robbed set. There in the bed was the telltale track with the missing toe. With irritating regularity this same scene was to be reenacted throughout the major portion of two trapping seasons.

We studied his trail and tried every ruse we knew. We boiled our traps in cedar, logwood chips, walnut hulls and every other concoction known to the trade. Yet that old gray always found the traps, and always he snapped them, dragged them well away from the bed, and ate the bait. It was not until late February of the second season that he made the mistake of raiding a set when the snow was on. There his strategy came to light.

We had the habit of cutting bushes along the way to use as clogs. When he located the set he approached cautiously, coming in to the clog rather than the traps. He had grabbed the bush and leaped some five feet away, jerking the lightly set traps and thereby snapping them and getting them well clear of the bed all at the same time. Then he had walked boldly to the bed and devoured the bait.

IT WAS IN MARCH before the snow went off so we could prepare a special set for Three Toes. We made our main bed with obvious boldness and fastened the traps to a red cedar bush with only a small portion of the trunk cleaned of branches sufficiently to allow a hold on it. We placed this portion of the cedar directly above a large white oak so that the fox would have to come in to it from the upper side. There was where we placed the most elaborate bed of steel in our entire trapping career. It worked.

Three Toes was waiting for us the following morning. He was very well composed. He had not broken a foot or fought the traps to excess. He lay close to the ground, his amber eyes following every move we made, but he did not

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one time time snarl. Afterwards we wondered what kind of a freak he really was, for that morning, even with all the fur he had cost us, he conned us into letting him go with his unique behavior. We excused ourselves by declaring that his fur was no longer prime. I shall never forget seeing him limp off around the hill, in no apparent hurry, turning once to look back before he melted into the forest shadow. He never bothered our traps again.

Unlike the bold red that may dash into the poultry yard in full day, the gray is shy, hunting mostly at night. Yet he will, during favorable weather or when hunting has been lean, remain in thickets or heavily timbered areas in an effort to surprise a squirrel or feeding grouse. He loves to sun. He will slip out about mid-afternoon, if he has a sunning rock near his den, or he may simply lay up in a choice location for an entire day. In a lifetime of tramping the woods, I have surprised many a sleeping fox, both red and gray. I have found them sleeping in hollow logs, hollow stumps, under logs and often just out in the open.

About two years after the first chase which I described, we were to observe a classic example of teamwork between a gray and his vixen. We insisted that it was the same old dog we had seen that first time, but we had no way of being certain.

It was Christmas week and we were taking our final hunt of the season. That year everything closed up on December 31 and we were far from our limit of grouse. The grays had been caught in the mountain, well away from the old crater by a trio of walkers and soon the mountain echoed with frantic baying.

We knew the hounds from previous chases. They were exceptionally fast, worked as a fan-shaped team and were difficult to shake. We knew at once that our fox was in trouble, for at that point we thought there was only one of the grays in the chase. We climbed quickly to a high knoll that overlooked the two main benches that coursed around the mountain. We felt certain that we would see the chase pass on one or the other level.

We didn't have long to wait. The old dog fox came bounding around the slope, running free, and the walker's were close on his heels. He came to a deep ravine where a small tree had fallen about halfway down, spanning it like a tiny footbridge. He leaped onto the small trunk and walked about halfway across. There he paused, measured the distance with his experienced eye, and sprang out through the air onto the trunk of a great oak that climbed up out of the ravine. He scrambled up to a big limb that grew away on the ravine side and sat down with his back to the tree and his tail curled about his feet.

WHEN THE HOUNDS CAME to the log, they cast out it briefly, catching the hot scent, then swept down through the little valley and up the other side, casting about for the trail. They were hardly over the rim until they bellowed away on a trail.

We looked at one another in amazement. We could hardly see how the hounds had found a trail when we could still see the fox there in the tree. There he sat for some thirty minutes while the dogs sang madly around the face of the mountain, moving in a great circle and eventually heading back toward us. Only then did we see the fox leap back onto the log bridge, move on across the ravine and lope out over the ridge.

He was hardly out of sight when we heard the vixen coming. She, too, ran to the log bridge, moved out about halfway, then leaped to the oak tree and repeated the performance of her mate. When the hounds had passed out of sight, she leaped back on the log, retreated to the near side and threaded her own trail back a short distance. She then turned sharply down the mountain and bounded away toward the crater den that to her spelled security.

The old dog led the hounds a mile or more around the foothills, giving his mate ample time to get to the crater, then he too quit the woodlands and sought out the safety of the den.

The hounds worried over the network of dens only briefly then turned homeward, and we turned back to our hunt, proud of the showing of our grays and happy that they were safe again there in that front yard den.

MANY WRITERS have described the gray fox as "shy and cowardly," which is far from correct. Shy, yes, if we were to compare him with his cousin, the red, but never cowardly.

When the gray must fight, he is a most vicious assailant; for he is just as brave and just as quick as he is shy. I have never seen one cowed. I have been assailed by a cornered gray when I was more than a dozen times his own weight. I once had a small dog so soundly thrashed by a vixen protecting her young that he had to be carried out of the mountain. Had not my father and younger brother arrived in time to drive off the fox, we believe she would have killed him.

The gray fox is not a wanton slayer. He hunts only for food. Unlike the wolf, he does not kill for the joy of killing. Nor does he kill and store great caches of food to decay, as does the red.

Few naturalists or outdoor writers have used words of kindness or praise in their writings on the gray fox. First, possibly, because they neglected to search out his virtues; and, second, writing that tended to condemn and thereby justify his persecution was considerably more in demand in the past.

True, the gray fox does, on occasion, bring discredit upon himself. Yet were his shadow to vanish suddenly and no longer thread the forest aisles like a silent breeze of the deep, and his querulous call from some high point on a crisp winter night cease to echo across the valleys, then certainly the enchantment of our mountains would be less rich, and the music of our winter night less sweet.

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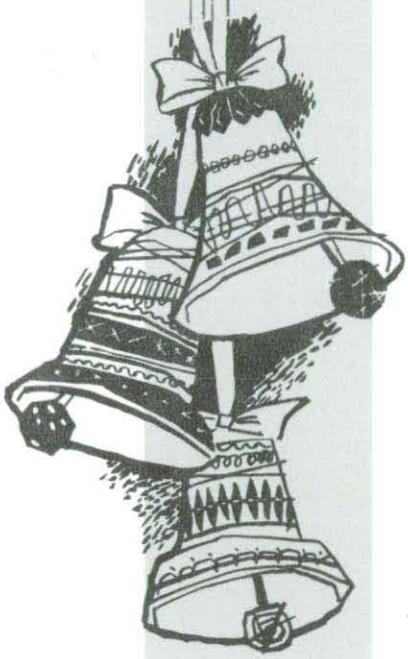

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TAKES A LOT TO HOUND BRUIN

LEONARD LEE RUE

DICK NEAL

BLACK BEAR KILL FIGURES for West Virginia are not big, but that group of hardy hunters who pursue this fine game animal are unique.

The dedication of the serious bear hunter to his sport is difficult for many outdoorsmen to understand. To try to explain it to an old bear hunter is unnecessary; to explain it to anyone else is impossible. John Ryder of the Ponderosa Game Farm, an avid bear hunter, says that anyone who would follow a pack of baying dogs through some of these West Virginia rhododendron thickets has to be a little off, and most anyone who would come upon a bear hunter about the time he breaks out of one of these thickets would probably agree. Dirty, sweat running down his forehead from over-exertion, bleeding face, arms and hands from encounters with greenbrier and blackberry bushes, clothes torn and a wild look on his face, he would probably greet you with a "Which way did the dogs go?" or "Where did that bear cross?"

Even though, for all practical purposes, we have only one week of legal bear hunting in this state (very few bear are killed in the late season), the serious bear hunter works the year around at his sport. There are hounds to be bred, traded and trained; there are areas to be scouted, trails to be cleaned, washed-out roads to be repaired; 4-wheel drive vehicles to put in first-class shape and two-way radios to check.

Because of the rugged terrain and inaccessible territory, most bear hunting in this state is done with hounds. Much has been said about chasing bear with dogs, pro and con. It is safe to say that the majority of those who condemn the use of hounds for bear hunting have never hunted with dogs. As far as I'm concerned, when you take the hounds out of bear hunting you have eliminated the sport. To shoot a bear at a bait or garbage dump, as it is done in some states, holds little more appeal than shooting sparrows in a chicken yard. On the other hand, the thrill of the chase, the baying of the hounds in hot pursuit, the ensuing fight when the bear is caught and maybe another chase if the bear decides to run again; the baying of a pack of dogs at a bear which finally has had enough and climbs a tree, and the mad race between the hunters to get to the tree first and claim the trophy. Arguing, discussing and bragging about which dog or whose dog put up the best chase, the best fight or barked "treed" first, all add to the thrill and excitement of the hunt. The kill is really incidental to the chase.

SPORT OF BEAR HUNTING is not entirely restricted to the one week when bear can be legally taken. Dogs must be trained and toughened up before season. Many bear hunters train their dogs in the off season on coon, bobcat and an occasional sheep-killer bear. A hunter who keeps a dozen dogs a whole year for a week's hunt has to love his sport. Cost of dog food alone can run into some pretty sizeable figures, to say nothing of kennels, veterinary supplies, dog collars, name tags, hauling crates, bedding and other incidental items.

The mere presence or availability of a pack of hounds is by no means a guarantee of a bear. If I were going to make a guess of the number of man days which go into one bear rug in West Virginia, I would say it takes about 90 hunter days to bag one bear. This means that if a party of 15

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hunts the entire six-day bear season and gets one bruin, they are about average; if they get two bears they can consider themselves quite lucky. The Department of Natural Resources recently estimated that $2,400 was spent in this state to bag one bear. From my hunting experience I would consider this to be a conservative estimate.

When a man puts all this time and money into a pack of dogs, he deserves consideration, especially from those who don't happen to contribute their own dogs to the chase. As a matter of sportsmanship and ethics, I have always considered any bear killed ahead of anyone else's dogs the property of the owner of those dogs. It's up to him to determine what distribution will be made of the head, hide and meat. He will generally give the head and hide to the one who shot the bear and the meat is generally divided among the hunters in the party.

After a bear has been killed, the first order of business is to catch and tie as many dogs as possible. Tie dogs separately and out of reach of each other. Bear dogs are generally fairly large, often ill-tempered and can inflict severe damage to one another, should a fight develop over the dead bear. Also, if you're going to have a bear chase tomorrow, you'd better tie the hounds before they have a chance to disappear in the woods. In the absence of rope or chains, use belts, boot laces or anything else handy to anchor the dogs to a nearby bush. Contact the dogs' owner and see that he gets his dogs back.

Although bear hunting has been traditionally popular in West Virginia, the black bear has only quite recently reached game animal status. Before that, it was rated as a varmint, a nuisance or a menace by the majority of state residents. Like many of our natural resources, protection and preservation were slow in coming. Even now remarkably little is being done to insure adequate numbers to satisfy an increasing number of bear hunters. Fortunately today, more and more people are interested in conserving rather than destroying a natural resource. With this growing awareness and interest, maybe my grandsons will have the opportunity to follow a pack of bear hounds through a rhododendron thicket in West Virginia many years from now—if they're a little off, that is!

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Give My Regards To 420

ROBERT T. BUTTERFIELD
Game Biologist

THERE HE WAS, coming down the old roadway following my bait line, each step bringing him closer to the area where the cannon trap was concealed. He appeared 3 feet tall, and I could see his dark beard against the glistening, snowy background. Suddenly the tom stopped and quickly retraced his steps, vanishing into the timber; something must have seemed unnatural. My chances of netting him seemed ghostly, whereas a minute ago everything looked certain.

Leaving home at 5 a.m., I had come to this ridge-top to trap wild turkeys. It was necessary to stop the pick-up some distance away from the bait lines and the baited area where the cannon net was set. This method of trapping turkeys was developed in West Virginia and has been used to transplant native turkeys through 39 counties. Restocking wild turkeys is one reason the annual kill continues to rise.

After stopping the truck a safe distance from the bait lines, I proceeded to crawl up a bank through thick laurel and greenbrier, which were covered with 8 inches of snow. I reached the blind just as it became light enough to see. Between snowflakes and timber, I could see what appeared to be a flock of turkeys, but upon closer examination I found the flock of birds was 35 black, grain-eating, squabbling crows.

Now, crows have their place in the world, but if they ate all the bait, what reason would a turkey have for coming to the trapping location? When I couldn't stand it any longer, I whistled like a phoebee and immediately the air was black with crows. Before long, however, they were gliding back into the baited area to resume eating my turkey bait.

What should I do? Would it be best to let them have their fill, or should I scare them away, and, perhaps in doing so, scare away all the turkeys which might be in the vicinity? While I was deciding, a lone gobbler came into view and then just as quickly, he was gone.

During the next 3 hours, numerous crows came and went talking, eating and having quite a time. My blind, a small pop-up tent daubed with green paint and covered with snow, was rapidly getting uncomfortably cold. Neither the heat from my body nor from the hot thermos which I had brought seemed to be warming the blind.

Finally I had to stand up, beat my arms and thrash around to get blood circulating. Looking through the screen window at the baited area some 60 yards away, all I could see was screen mesh making horizontal and vertical lines, and black, black crows. I soon sat back down and what little heat I had stored up quickly left. I looked again at the screened window in hopes of seeing a long-legged, long-necked tom, and there, as big as they come, walking down one of the bait lines, was that big gobbler again!

THROUGHOUT this three-hour period, that wise old turkey had been watching and waiting. He must have reasoned—if a turkey can reason—that, since the crows were eating and enjoying themselves, there was nothing to be suspicious of or afraid of. This time he was sure everything was all right and he did not hesitate. He began feeding on the wheat and corn in the baited area, and I knew it was time to see if the cannon net would work. I waited until he was dead center, touched the wire to a battery, and the net cascaded out and over the bird. After two flaps he lay quiet until I could reach him. The two tail feathers he lost in the net would soon be replaced.

Placing him in a traveling cage, I soon gave him his first automobile ride. Where did he go? Well, he is part of the turkey stocking the Department of Natural Resources is making on the Hughes River Public Hunting Area in Wirt county. This area now appears to be suitable for turkeys as it was during colonial times. This bird now has an aluminum band (number 420) on his right leg. He didn't seem to mind when I clamped it on. So, if you see number 420 give him my regards, you'll find him to be one of West Virginia's finest.

Virtually inaccessible now, rare geologic formations will be major attractions alongside Highland Scenic Highway 150, Pocahontas County.

ARNOUT HYDE JR.

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NATIVE HEMLOCKS AND PINES

ROBERT LEO SMITH

Hemlock. BOB COMBS

"THERE'S A LOT of grouse down in the pine," he told me. I looked and couldn't see any pines. All I could see was a dense stand of hemlock along the stream bottom.

"Oh," I said, "you mean down there."

"Yea, down there," he replied. The old man had his trees confused, at least I thought until I discovered that, further south in West Virginia, hemlock and most other conifers were all pines to many people. True pines are one kind of tree and hemlocks are another. There is no better time to become acquainted with them than in the heart of winter when they all stand out sharply in the barren deciduous woods.

Hemlocks are in a general group of single-needled evergreen—the needles are attached singly to the twig; the pines have their needles in bundles. Over most of our region the hemlock can hardly be confused with any other. Its needles are flattened or semicircular in cross section, blunt pointed and attached by tiny thread-like stems to woody projections on the sides of the stems. The needles are dark green with two white lines on the underside. Its branches are slender, horizontal and drooping and it bears small pendant cones with thin scales that are highly attractive to crossbills and pine siskins.

The only other tree in our country with which the hemlock might be confused is the balsam fir that grows in high mountains. Like those of the hemlock, the needles are flattened, two-ranked and blunt, dark, shiny green above and whitish below. They are longer, shinier and leave a circular leaf scar when the needles fall or are removed. The cones are relatively large and erect and they mature in autumn of the first growing season and break up quickly. The twigs are heavier and lack the graceful flexibility of the hemlock.

Other single-needled conifers are spruces. They have short, four-angled, stiff, sharp-pointed needles as many may have discovered while decorating a Christmas tree. They are stemless and each is attached to a small raised base. They are not two-ranked like the hemlock and balsam fir, but spiral around the twig or are curved and twisted toward the upper side.

The spruce most commonly used in the Christmas tree trade and the one most commonly planted as an ornamental is the Norway spruce. A native of northern Europe, Norway spruce was widely planted about homesteads in this country following the Civil War. In early years the tree is straight and cone-shaped with branches in whorls; as the tree ages its lower branches droop. At high elevations grows the native red spruce, with orange-brown hairy twigs and short dark yellow-green needles.

IN CONTRAST TO THE HEMLOCKS, firs and spruces, the pines have their needles in bundles. Some have their needles in twos, threes or fives. Thus, to sort out the pines one has to discover how many needles there are in the bundle. If the tree has five then it is a white pine. With its distinctive soft bark, blue-green needles, its crown of nearly horizontal and plume-like ascending branches, the tree is easily recognizable at considerable distances.

A number of pines have two needles. One of them is the red pine widely planted as a plantation tree. Its two needles are four to six inches long,

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dark, yellow-green, flexible and they break off cleanly when they are doubled over. Native two-needled pines include the Virginia pine or scrub pine and the short-leafed pine which grow extensively in old abandoned fields, have two-inch long yellow-green needles that are stout and usually twisted. Their cones have a flattened base and the bracts are reddish with small, sharp, straight or curved prickles.

Another is the table mountain pine found in the higher mountains. It too has twisted needles, but they are much more rigid than those of Virginia pine and its cones are larger, often clustered and are armed with conspicuous sharp spurs. Growing on dry upland sites is short-leafed pine that has three to five-inch-long needles that might be confused with the red pine. Red pine is not a native to our region and is found only in plantations. The cones have a very short stem and are armed with small, sharp, straight or curved prickles.

To confuse identification, the short-leaf pine often has three needles to a bundle, and bundles of two and three needles may grow on the same tree. Because of the three needles and the similar bark on older trees, the short-leaf may be confused with the pitch pine which has three to five-inch needles to a bundle. Its cones, too, are armed with prickles. The needles of pitch pine are stiff and usually somewhat twisted which is in contrast to the flexible slender needles of short-leaf pine. The pitch pine is common to dry ridge tops and south-facing slopes where its tall bole and small open crown adds a rugged wildness to the mountain tops.

THE TWO-NEEDLES PINE, most familiar to the majority of us, is the Scotch pine that makes up the backbone of the Christmas tree trade. It has blue-green, usually slightly twisted sharp pointed needles and relatively small cones that are not much longer than the needles. Small trees just might be confused with Virginia pine, but as the trees begin to age just a little, the bark becomes orange in color, which alone is enough to set it apart from other pines.

Some conifers go one step further and have their needles in clusters or tufts. They shed their needles each fall and grow new ones in the spring like a deciduous tree. These are the larches. Two species, the European larch and the Japanese larch, have been planted extensively as ornamentals and in some places as plantation trees. Our native larch, the tamarack, is at home in sphagnum bogs, and the only place it can be found in West Virginia is in Cranesville Swamp, Preston County, the southernmost known part of its range. Another conifer that sheds its leaves each fall is the bald cypress which has two-ranked, hemlock-like needles. A native of coastal and Mississippi River swamps, the bald cypress has been planted locally, and a few old specimens can be found in towns.

This leaves the cedars, which have scale-like flattened needles. One is the white cedar more

Spruce.

correctly known as arborvitae, and, as such, is familiar to many home owners as an ornamental. Its leaves are flat, opposite and closely pressed to the twig which makes the twig and leaves look like one. It is associated with limestone soils, and grows naturally in eastern parts of the state, especially in the Greenbrier Valley.

Red cedar, really a juniper, is a common old field invader, especially throughout the southern portions of West Virginia where it is often used as a Christmas tree. On seedling trees and vigorously growing branches, the very sharp-pointed needles are arranged in pairs, or in threes with the tips spreading widely from the twig. On older branches and trees, the leaves are pressed closely to the twig-producing dark green, scaly, four-sided branchlets. The fruit, a fleshy, dark blue, berry-like cone the size of a pea, is borne in large numbers on the vigorous shoots of female trees. The fruits are useful in teas and the characteristic taste of gin is obtained by adding juniper berries during the aging process.

Not all of our conifers are pines. We have an assortment of them in our mountains from hemlock to red cedar. In winter, there is no better time to become acquainted with them, when they stand out bright green against a dazzling snow background.

Panorama of Pipestem State Park.

ARNOUT HYDE JR.

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DNR

DNR

CALLING ALL TURKEYS . . .

LEONARD LEE RUE

"I'm a-comin'."

JAMES C. PACK and JACK W. THOMAS

HUNTERS using turkey callers with a moderate amount of skill have nearly twice the chance of having roast wild turkey than those who rely on the quiet approach, or just luck. In fact, wildlife managers checking some 300 turkey hunters in West Virginia last year found that among the successful nimrods who bagged a turkey, non-callers expended 70 percent more effort to bag their tom than hunters who "talked turkey" on their man-made calling devices.

Of the hunters interviewed, it is interesting to note that they used a variety of luring calls: box, slate, wingbone, yelper or some other type of caller.

A box caller is the overwhelming favorite, probably because it is hard to beat for reliability. With a moderate amount of practice, a novice can quickly master this type. The slate caller can produce a tone that is a near-perfect imitation of a turkey, but it is easy to err in using it. However, don't be discouraged from buying a slate caller, for some get the knack of the thing in 5 minutes. The diaphragm, or mouth caller, produces a nice tone but requires replacing the diaphragm often. This caller has the distinct advantage of leaving the hands free for gun handling which can be important when a split-second counts. The yelper, or wingbone, caller is not used much by hunters, probably because it is the hardest to use properly and unerringly. However, many Mountaineers have killed turkeys using this caller, and it is still the favorite of a select few with the talent to make it talk.

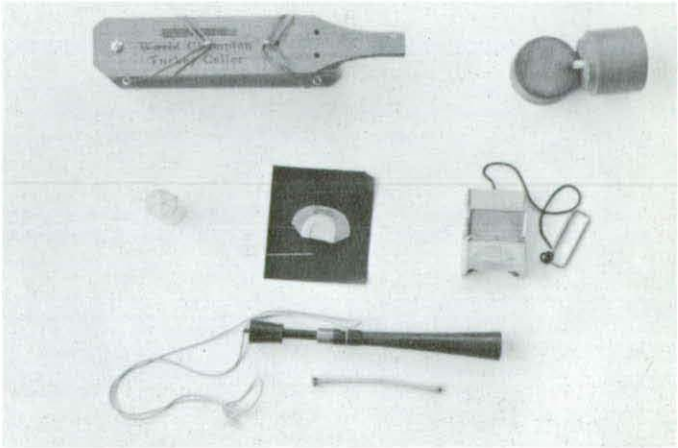
Too many hunters believe that turkey calling is a great art and almost impossible to master. It is true to get a wily old tom within shotgun range it is necessary to "talk turkey." On the other hand, young birds, particularly early in the season, can be brought to the hunter with only a fair-to-middlin' imitation of a turkey.

IT TAKES YEARS to know all the vocal communications of the turkey flocks, how to imitate them on the caller, and how and when to use them to best advantage in hunting. One or two basic calls can be learned in a few minutes, and those are enough to get you in on the fun.

An experienced turkey hunter can start you on the right road, or you can get the basics down pat by using commercially available records. These records, found in sporting goods stores, feature a coach telling just how to do it and various experts mimicking and identifying a number of calls.

One of the payoffs to learning the art of calling is understanding what turkeys are saying to each other—that can be a great aid in hunting.

If you are convinced you should get a caller, don't be disappointed if you don't score the next time out. You may bag a big tom without ever using a turkey caller, but we assure you it is much more exciting to try to call a bird into shooting range than try to sneak up on a turkey, or to shoot one on the wing after it has been flushed by someone else. In our opinion, a turkey caller, properly used, will not only greatly improve your chances of success but will double your pleasure—double your fun in the outing.



TYPES OF TURKEY CALLERS: Top row, box and slate callers; middle row, three types of diaphragm callers. The center caller allows complete freedom of the hands; bottom row, yelper callers—one is man-made and the other is a wingbone from a turkey.

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License Fees are NOT taxes

FARRELL COPELIN

Reprinted and adapted from OUTDOOR OKLAHOMA

Are hunting and fishing license fees "taxes?" Not if we adhere to constitutional and legislative definition.

Fees are paid by volunteers for a PERMISSIVE PRIVILEGE. Like doctor's fees, they also are given in exchange for services. By contrast, "taxes" are IMPOSED burdens, or FORCED contributions, for public purposes.

Hunting and fishing licenses are clearly not taxes. In exchange for your license dollar you receive full measure in your sport. When license fees fall below the cost of good hunting and fishing, these activities suffer in quality and quantity. A fee increase is asked for only when needed.

When people are asked if they want good fishing, nearly all reply "Of course!" Better quail hunting? Rabbits when you seek them? Squirrels in the fall? Naturally!"

How about something new? Striped bass? Northern pike? Golden trout? The fisher? "You bet!"

Would our deer and wild turkey be as widespread and abundant today if their success were left to chance?

NO! A price was paid to transplant breeding stock, protect it and develop habitat. You get what you pay for is the case everywhere.

Yet when sportsmen are asked if they would agree to a license fee increase, the answers may vary.

Those who know of the cost of planting game before it can be harvested, managing it at great expense, providing suitable habitat and introducing desired new species, unhesitatingly reply "Yes". Such persons are willing to pay more now in order to have more game later. They are not the only ones who benefit, even though they foot most of the bill.

Every citizen benefits from the clean water necessary to produce fish and fishing! High water quality is helpful to cities and towns, industry, the outdoor enthusiast, namely, everyone in the state.

For instance, sportsman's dollars helped support the conservation education effort that brought the dangers of water resource threats to the public conscience. This effort is also directed at impressing upon us that, without the clean, soothing environment associated with an abundance of wild creatures, the mind of our society will sicken.

Scenic rivers, lakes, ponds and public hunting grounds operated and managed with state and federal money provide such quiet byroads of our progress, open to everyone. They are made possible by hunters and fishermen, and a few conservation-minded groups that do not participate in these sports.

During 1969 in West Virginia, approximately 238,000 licensed fishermen and 249,000 licensed hunters came forward to say "I want to play, and I will pay."

Evidently many of these people view a fee increase as a way to insure that they, their children and future generations will have a better place in which to live. Some refer to it as a chance for a quality outdoor experience in a pleasing environment.

Others buy a fishing or hunting license only because of legal requirements. "If you want to dance, you must pay the fiddler," they admit. To these people an increase in fees is an increase in "taxes."

As you know, we have actively urged increases in revenue for wildlife conservation programs, and have pursued these views vigorously because we felt they were in the public interest.

We in government are servants, hopefully trying to carry out the wishes of the people, but in the final analysis, attitudes determine future courses of action.

How do you view a fee increase?

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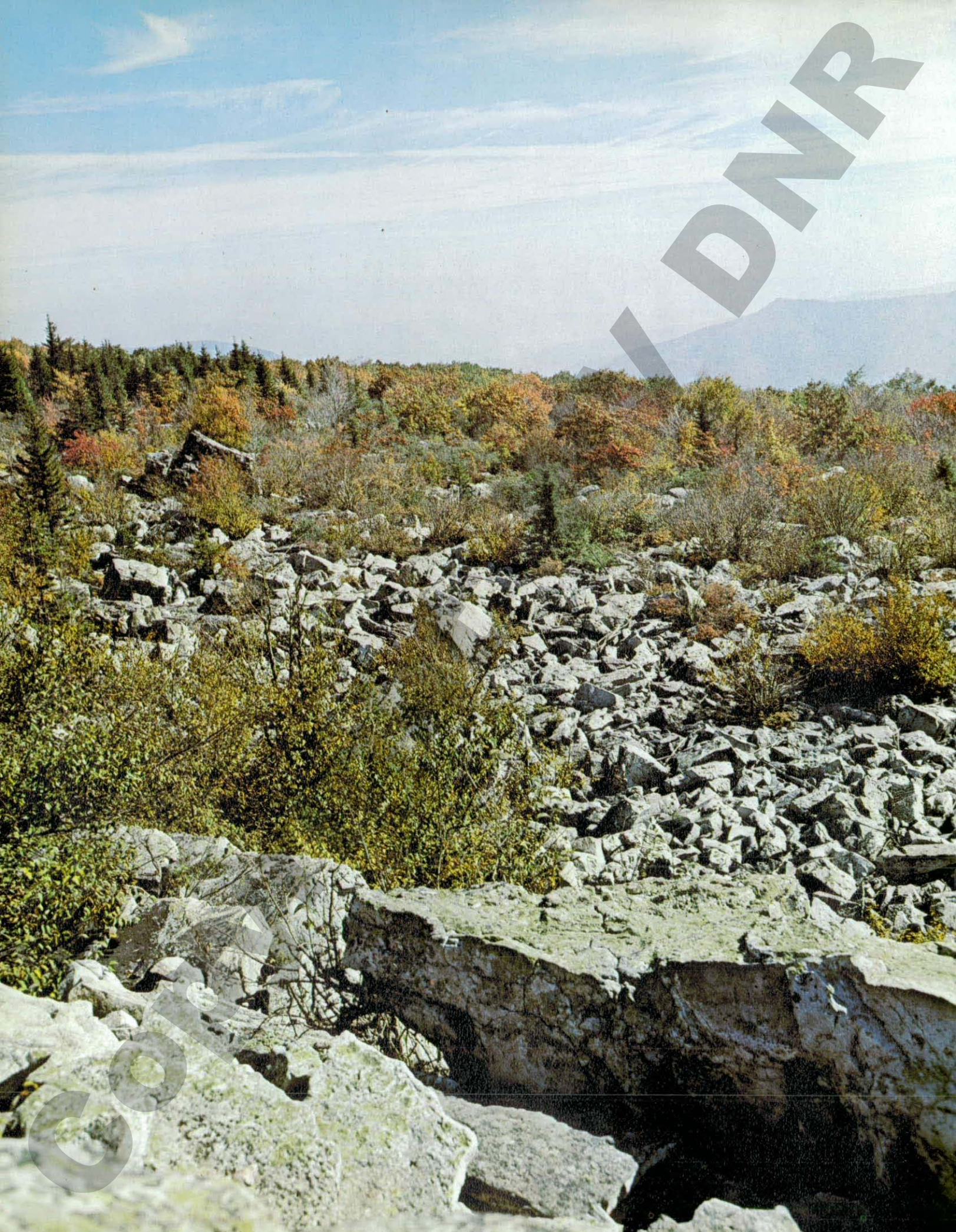

DNR

NEW SPORT POPS IN WEST VIRGINIA

COL. LELAND S. DEVORE JR.

MANY PEOPLE have enjoyed plinking or target shooting with a .22 rifle, but with fewer of us living in the country, and open spaces hard to find, the chance to do such shooting safely and conveniently has greatly diminished.

In the last few years a type of rifle, long common in Europe, has gained acceptance in this country, and it is a natural for shooting in restricted areas, either inside or out: it's the .177 pellet gun, or air arm.

Don't, in any way shape or form, confuse this with a BB gun. It is a high velocity, rifled, extremely accurate piece of ordnance. Up to normal target and plinking distances, most people can shoot this rifle more accurately than a .22 Its muzzle velocity is about 650 feet per second, and this will easily rip through both sides of a coke-can, yet the light weight of the pellet makes it safe enough to use in your own back yard or basement with a light home-made backstop.

This rifle is, for practical purposes, recoilless, silent, beautifully made and finished. The better ones come equipped with adjustable trigger pull, micrometer sights or scopes and many other high-power rifle features. Cost, based on make and model, may range from about $40 to over $100, but the cost of ammunition (pellets) is so low you can shoot all day for about a dollar!

These guns are air-operated, not CO_2. This avoids the velocity drop-off associated with CO_2 guns when the gas-cartridge starts to lose pressure. Also, you don't pump them up; a single action cocks them, at full and non-variable power.

The best of these rifles, in my opinion, are made in West Germany. Good brand-names are Weirauch, Bavaria, Feinwerkbau and Diana. Each of these manufacturers makes several types, including sporting and match-target models. Within these models there are many variations and accessories such as checkered walnut stocks, right or left hand Tyrolean stocks, interchangeable aperture sights or scopes and weights from 6 to 11 pounds. Any one of these will give incredible accuracy —about .18 inch spread at 33 feet or groups of about 1½ inches at 40 to 50 yards.

Until recently, the one drawback to this rosy picture has been how to get these rifles. Most stores do not carry them, or know little about them. Practically no one offered accessories or service. Through the initiative and enterprise of a West Virginian this problem has now been overcome by the establishment of the Air Rifle Headquarters in Grantsville, W. Va. This is the largest operation of its kind in the world dealing exclusively with the importing, testing and servicing of these air arms and associated accessories. This puts West Virginia right in the center of one additional fast-growing sport.

This is a real gun, suitable for either the expert shot or the novice. It is definitely NOT a toy. It is the answer to the safety, space, noise and expense problems of rifle shooting. Try an air arm and join the fun!

HEART DISEASE FROM THE AIR

Two California physicians have demonstrated strong correlations between air pollution and increased deaths from coronary heart disease and strokes.

The New York Times reported that Drs. Warren Winkelstein, Jr. and Michael L. Gay of the University of California at Berkeley found mortality rates from arteriosclerotic heart disease and cerebrovascular disease in heavily polluted areas to be 79 percent higher than in those with relatively clean air.—CONSERVATION NEWS, National Wildlife Federation.

PLANT DETECTIVES

Though not particularly rare in the eastern United States, only one patch, or station as botanists call it, of evergreen grapeferns had ever been reported in West Virginia, found at Gatewood Switch, Pendleton County. That was by Dr. Earl L. Core and P. D. Strausbaugh of WVU in 1952.

Two Ohioans, Allison W. Cusick of Kent State University and naturalist Mrs. Garnet Shelton, deduced that there must be more somewhere here and set out to find it.

Their sleuthing paid off for the very first station they visited yielded the grapefern or **Botrychium oneidense** on Laurel Trail in Tomlinson Run State Park, Hancock County. They reported that, among the dull bronze blades of a near relative, the lustrous green fronds of their quest shone distinctly. Their needle-in-the-haystack success would have done Sherlock Holmes proud.

ACHING BACK

Convicted litterbugs now can be sentenced to three days of hard labor picking up litter on the basis of a law passed recently in Michigan.

STOP, NOW!

Man's inherent trait of seeking ascendancy over his environment has been the driving force behind the emergence of civilization, and may result in its downfall. The great early civilizations overexploited their resources, and farmed themselves out of existence. We are in a period of grace. We have the time, perhaps a generation, in which to save the environment from the final effects of the violence we have done to it.—Gary Lantz, OUTDOOR OKLAHOMA.

Man is no more important than the ant in the ecological chain.

Mother Nature has a unique way of using the waste products of one life system to nurture the well-being of another. Yet when the waste becomes abundant and nature cannot transform all of it into a beneficial nutrient, the waste becomes a pollutant.—OUTDOOR OKLAHOMA

Man has disrupted a chain of natural events that Nature has spent millions of years engineering. Each year, the U.S. alone destroys more than a million acres of oxygen-producing trees to make way for highways.—OUTDOOR OKLAHOMA

Rugged Dolly Sods.

ARNOUT HYDE JR.

CLEAN SWEEP

If everyone would sweep in front of his own door, the whole world would soon be clean.—W. A. Nance

WE ARE ALL PIGS

Although we in the United States only account for five percent of the world population, we consume 40% of the world's natural resources.—OUTDOOR OKLAHOMA

TRASHY

Americans abandon and junk 1,000,000 cars, 100-million tires, 20-million tons of paper, 28-billion bottles and 48-billion cans on the landscape in one year's time.—OUTDOOR OKLAHOMA

If our bodies are so full of DDT as scientists tell us, how come mosquitoes and other pesky pests don't drop dead when they bite us?—FH

The DDT content is .10 to .30 parts per million in the milk of nursing mothers . . . two to six times the amount allowed in milk for commercial sale.—OUTDOOR OKLAHOMA

World population now stands at 3.5 billion, and estimates place the population in the year 2000 at a colossal 7 billion. Warnings have been voiced that our breathable atmosphere will not be able to sustain that many people.—OUTDOOR OKLAHOMA

In the midst of plenty, man is producing himself into poverty. . . and possible extinction.—OUTDOOR OKLAHOMA

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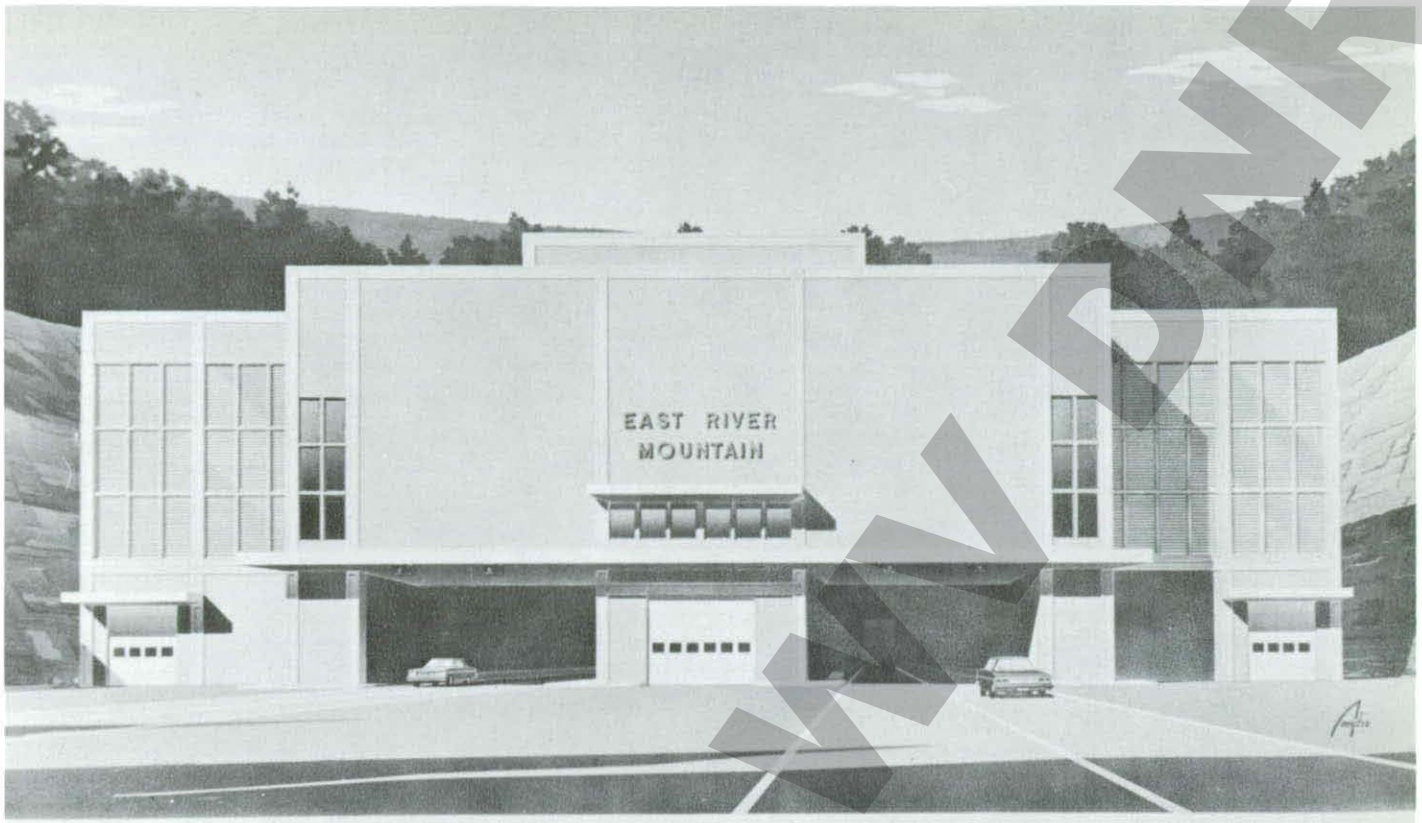

EAST RIVER MOUNTAIN TUNNEL
MERCER COUNTY, WEST VIRGINIA
BLAND COUNTY, VIRGINIA

EAST RIVER MOUNTAIN TUNNEL

TINA SONIS

PROVIDING THE EASIEST route for traffic of the future is by no means the easiest task for the West Virginia Department of Highways.

A perfect example is the tunnel now being bored through East River Mountain to connect Mercer County, W. Va. with Bland County, Va.

The twin tubes will be a vital link in the north-south Interstate Route 77, carrying the superhighway through the vast mountain that borders the two states and eliminating many miles of travel on the present route.

On August 12, 1969, Governor Arch A. Moore Jr. and Virginia Governor Mills E. Godwin Jr. triggered a dynamite blast at the base of the mountain and thus began construction of the costliest project ever undertaken by the Department of Highways.

Gordon H. Ball Company and S. A. Healy, Inc. of Danville, Calif. presently are working 'round the clock at the tunnel site under a $23.7 million contract awarded by the Department in July 1969.

When completed, the tunnel will be slightly more than a mile in length.

In the early 1960's both West Virginia and Virginia engaged consulting engineering firms to make location studies pertaining to the Interstate in the vicinity of the mountain. Both reports proposed crossing the East River Mountain through a tunnel approximately five miles east of Bluefield, W. Va.

The West Virginia—Virginia border will be almost in the center of the tunnel, with nearly 2464 feet of the tunnel's length in West Virginia and some 2948 feet running through Virginia.

Each tube will contain two 13-foot travel lanes and a sidewalk, combining for a total width of some 31 feet. The minimum vertical roadway clearance will be 16 ½ feet.

The walls will be lined with ceramic tile, which over the years has proved to be the most satisfactory wall finish for tunnels because of its ease of cleaning and durability.

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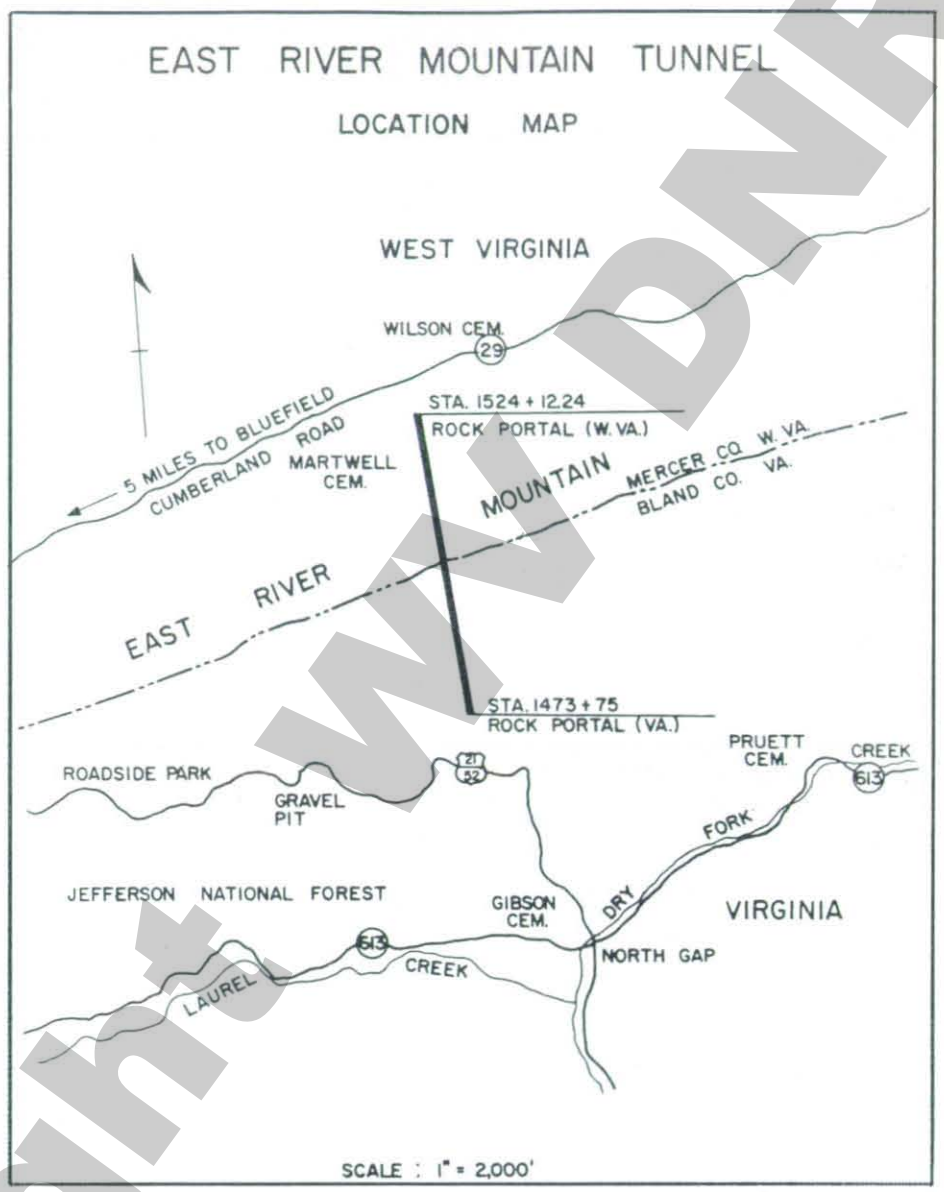
FLUORESCENT TUBES, used in most recent tunnel design, will be installed in fixtures in a continuous line on each wall. In the event of a power failure, emergency generators will be provided to start automatically and provide lighting down the inside wall of each tunnel. These generators also will permit minimum fan operation.

Approximately 45 seconds is required before emergency lighting can be provided, so motorists will be instructed to use their headlights on low beam when traveling through the tunnel at all times.

The portal buildings will be used primarily to house the ventilating fans and electrical equipment. In addition, facilities for operating personnel, garage space for emergency vehicles and storage for parts and equipment will be provided.

The portal building on the West Virginia side of the mountain will be headquarters for the control room for the tunnel. A control board will afford an operator supervision of the operation of ventilation, lighting, traffic control and other functions.

The ventilation system will be equipped with special monitoring devices to maintain an extremely low level of carbon monoxide in the tunnel. If safe levels are exceeded, an alarm will alert the operator to increase ventilation.



A series of special telephone and alarm boxes, along with fire extinguishers, will be spaced at regular intervals throughout the length of the tunnel to meet any emergencies that may arise.

All four contracts are slated for completion in late 1972 at a cost of some $28 million.

West Virginia will construct the tunnel in its entirety, with Virginia paying its proportionate share of the 10% cost to the states and the federal government financing 90% of the total cost. Once the tunnel is opened, Virginia will be responsible for its maintenance, with the Mountain State footing its share of the expense. This arrangement was agreed upon since Virginia soon will have another tunnel—through Big Walker Mountain some 20 miles south of the border—to maintain.

Of the state's six interstate routes, I-77 will be the longest with nearly 190 miles between the Ohio River at Williamstown and the East River Mountain Tunnel.

The years of engineering and millions of dollars soon will result in quite an impressive entrance to and exit from Wonderful West Virginia.

TOWN BANS THROWAWAYS

On April 1, 1971 the sale of all nonreturnable soft drink and beer containers will be illegal within the city limits of Bowie, Maryland, a Washington, D.C. suburb of 40,000. Stores violating the city ordinance will be subject to a $100 per day fine.—National Wildlife Federation.

NO CAN RETURN

Is there anything you can't can?

Just because you can can, should you can?

This year Americans alone will throw away more than FIFTY BILLION CANS—that's fifteen cans for every living person on the face of the earth! Cans or tins are very seldom manufactured to be reusable. Cans preserve things for us to use—they also preserve themselves in a nearly immortal manner that is of no use at all! Add to this the non-degradable waste from over four billion dollars' worth of plastic jars and bottles every year—they are of no use after one use either!—PLAIN TRUTH Magazine

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TOURISM UP

Latest figures indicate tourism in West Virginia has climbed to third place in industry preceeded only by manufacturing and coal production.

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VACATION FARMS WELCOME FALL HUNTERS, TOO

BARBARA BEURY MCCALLUM

ANOTHER JOY OF HUNTING is to return after a long day afield and find a homecooked meal, comfortable bed, and someone with whom perhaps to discuss the day's hunt.

In most cases, better hunting areas are not located near metropolitan areas. This problem maybe remedied in West Virginia through a unique farm vacation program sponsored by the Department of Commerce, Department of Agriculture, and West Virginia Farm Vacation Committee.

As the name indicates, this program also encompasses year-round vacations for families and provides a wholesome change of pace from the day-to-day routine of city life.

Children delight in milking a cow for the first time, gathering freshly laid eggs, pitching hay or taking a plunge in the ol' swimming hole. As for the family, activities are virtually limitless. Riding, boating, fishing, swimming and hiking are all part of a farm vacation and the farm is geared to such family participation.

The farm vacation program was established with two purposes in mind: the vacationing family or sportsman enjoys the warmth and hospitality of the farm home, and the farmer is provided with an additional source of income.

For a better idea of what a West Virginia farm vacation offers, here are descriptions of four typical, participating farms which were selected with fall hunters and fishermen in mind:

GREEN VALLEY FARMS, Wilson and Verdie Teets, Lost River, Hardy County. Their 3,000-acre farm is located near Lost River State Park and the George Washington National Forest. Lodging facilities include 20 rooms with two double beds, 12 rooms with twin beds, as well as cottages that will accommodate eight persons, a lodge and bunkhouse. They have boats on Lost River, riding horses, guided tours, pond and stream fishing and an outdoor fireplace. Guests are accepted from Easter until after Christmas.

MAPLE GROVE FARMS, Ray and Ollie Shipe. Located one mile east of Mathias near Moorefield, Hardy County, this 500-acre farm has three rooms with double beds, three rooms with twin beds and three single rooms, plus a cottage that will accommodate six persons. There is pond and stream fishing and outdoor fireplace. Guests are welcome from April to December.

Hunting for comfortable lodging? Try a vacation farm.

KEISTER SUMMIT, Leslie and Chloe Keister, Upper Tract, Pendleton County. Located 12 miles north of Franklin, the house, which has been in the Keister family since 1880, has been modernized with five guest rooms, two baths, a screened porch, and a large open porch facing a breathtaking panorama. This 365-acre farm joins the Monongahela National Forest where hunters find deer, squirrel, rabbit, wild turkey and grouse. The South Branch of the Potomac, within sight, and Smoke Hole, six miles north, offer excellent bass and trout fishing. Meals at Keister Summit are served family style and specialties are home baking, country ham and rainbow trout. Guests are welcome the year-round.

THE MAPLES, Eston and Evelyn Teter, Fort Seybert, Pendleton County. This 500-acre farm, located between Franklin and Brandywine, has cottages which accommodate six persons each, with extra rollaway beds available. Guests are invited to visit at the main farm house for an overnight stay. Bass and trout fishing, deer, squirrel and turkey hunting are available. The hunting area on the farm is reserved for guests.

A complete listing of farms participating in this program is available from the Travel Development Division, Department of Commerce, State Capitol, Charleston, W. Va. 25305. Each has been visited by inspection teams and meets the requirements set up by the Farm Vacation Committee. Advance reservations are advisable and may be made by writing the individual guest farm directly.

Fall hunting vacations on welcome farms may also include handy trout fishing.

ARNOUT HYDE JR.

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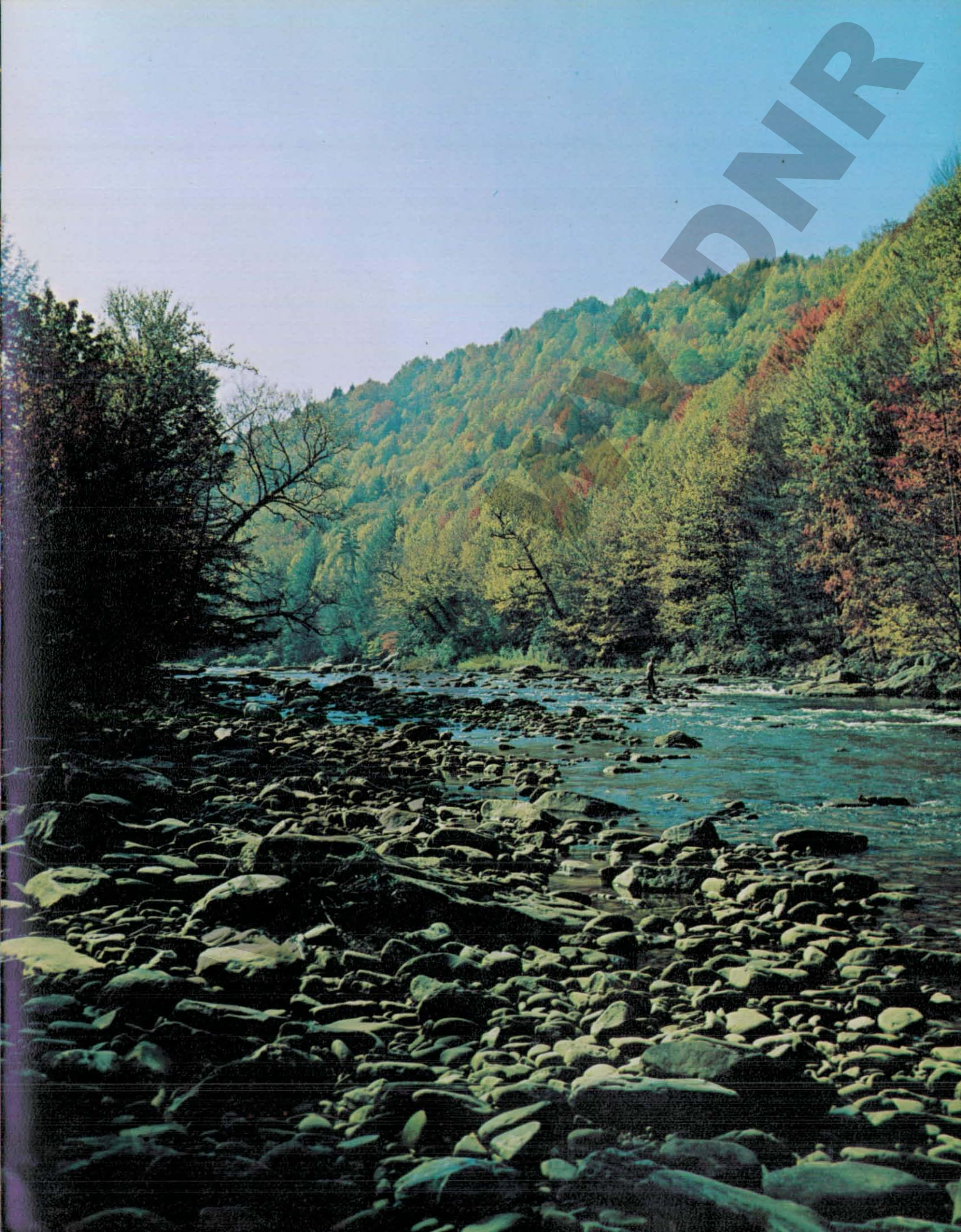


NY DNR

DNR'S MAXINE SCARBRO NAMED TO TOP CONSERVATION POST

Mrs. Maxine Scarbro, administrative assistant in charge of Women's and Youth Activities for the West Virginia Department of Natural Resources was installed June 12 in San Antonio, Texas as National Conservation Chairman for the General Federation of Women's Clubs.

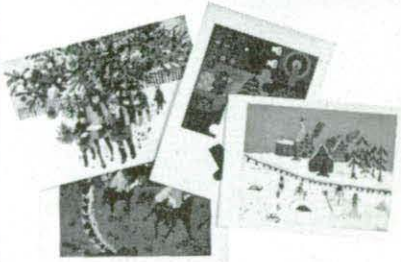
Mrs. Scarbro, who is now serving as conservation leader for the world's largest women's organization, consisting of 11,000,000 members, announced some of her plans after the installation. Those items included an environmental conference for the fifty state conservation chairmen, which will be held in New Orleans on November 16-18, 1970, under the co-sponsorship of the General Federation of Women's Clubs and Shell Oil Company. The conference will include talks by conservation experts on various phases of our environment.

After the conference in New Orleans, plans will be announced for an environmental responsibility program with awards in each of the fifty states.

MRS. JAMES A. SCARBRO of Ripley, West Virginia, chairman of the conservation department of the General Federation of Women's Clubs, recently met in Tulsa, Okla., with officials of Cities Service Oil Company, national co-sponsor of the Business for Beauty program. Mrs. Scarbro is shown as she maps program improvements with Stanley D. Breitweiser, executive vice president of Cities Service Oil Company and chairman of the American Petroleum Institute's Committee on Service Station Environment.

Our kids have everything.

Leprosy, Trachoma, Malaria, Yaws, and Empty Stomachs.



This year, buy UNICEF Greeting Cards.

You'll be helping sick and hungry children all over the world live a healthier, happier life through the United Nations Children's Fund.

For your free illustrated brochure and order form, write: **UNICEF Greeting Cards, 673 First Avenue, New York, N.Y. 10016.**

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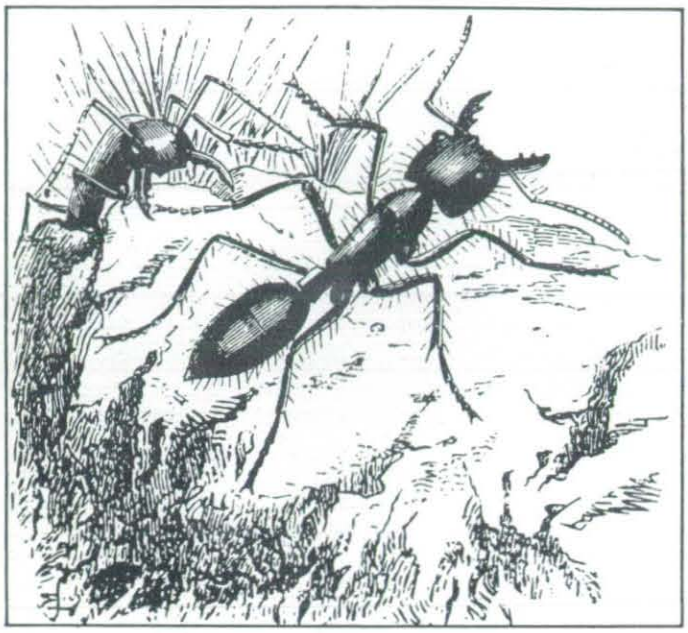
The Black Ant

by A. I. Alexander

Reprinted from TROUT magazine



The average fly fisherman on the trout stream today carries quite a number of flies representing a group of insects not originating in or near the water. There are imitations of grasshoppers, leaf hoppers, crickets, beetles and ants to name but a few of the myriads of insects that on occasion—and sometimes in great numbers—find their way into the water, providing a welcome side dish to the trout's regular stream fare.

Fly fishermen have been aware of the usefulness of imitating terrestrials from the beginning of recorded fly-fishing history. One of our earliest, if not the earliest, reference to a fly is by Aelian in the third century who, in **De Natura Animalium,** describes a fly, called the hippourus, which is an imitation of a bee or wasplike insect. Dame Juliana Berners, in the **Treatise of Fishing with an Angle** (1496), gives the dressing of one land-bred insect, the wasp, in her famous "Jury" of twelve fly dressings. In the second part of **The Compleat Angler,** in 1676, Charles Cotton pulled fly fishing out of the repetitious treadmill caused by angling writers restating the Berners' list with the presentation of sixty-five fly patterns found to be of interest to trout and grayling. To be sure, some of Cotton's patterns were generalized or fancy patterns, but most of them had natural counterparts, and many among them are terrestrials, including several gnats, a wasp-fly, two grasshoppers, and a couple of ant flies, "a killing pattern."

After Cotton's list of fly patterns, the additions and variations of succeeding writers become astronomical. The terrestrials remain important, however, and the inclusion of some type of grasshopper or ant is almost universal among them. Particularly notable are the red and black ants. Bowlker's **Art of Angling** (1747) further defined the ants into "large and small red" and "large and small black." Aldam's **Quaint Treatise on Flees and the Art a Artyfichall Flee Making** (1875) added the "small common ant."

In America, Louis Rhead conducted the first thorough investigations on stream entomology and enumerated a great many terrestrial insects along with drawings and paintings of them. Unfortunately, in his zeal, he also gave the dressings for some that are unknown on the trout streams. One question Rhead asked was: "Why trout should condescend to take this insect with its puny body encased in a hard black shell, when fat juicy insects are almost always at hand." Six years later, in 1922, the scientifically trained E. R. Hewitt asked himself the same question and postulated the probable answer: that it was due to the sour taste caused by the formic acid which pleased their palate.

In recent years, one of the better observations on terrestrials—and particularly ants—is that they frequently occupy a place in the surface film and a V-cut from the bottom of the hackle, such as was first described by John Dunne in **Sunshine and the Dry Fly** (1924), places them properly in the water. The question today, as our streams become harder pressed and our trout more sophisticated, is whether we need to press on for more and better imitations of the 2500-odd species of ants or whether we can still rely on a "little red" and a "little black."

The Dressing:

Hook—No. 12 - 20.
Body—Black dyed seal.
Hackle—Black, tied sparse and V-cut on bottom.
Silk—Black.

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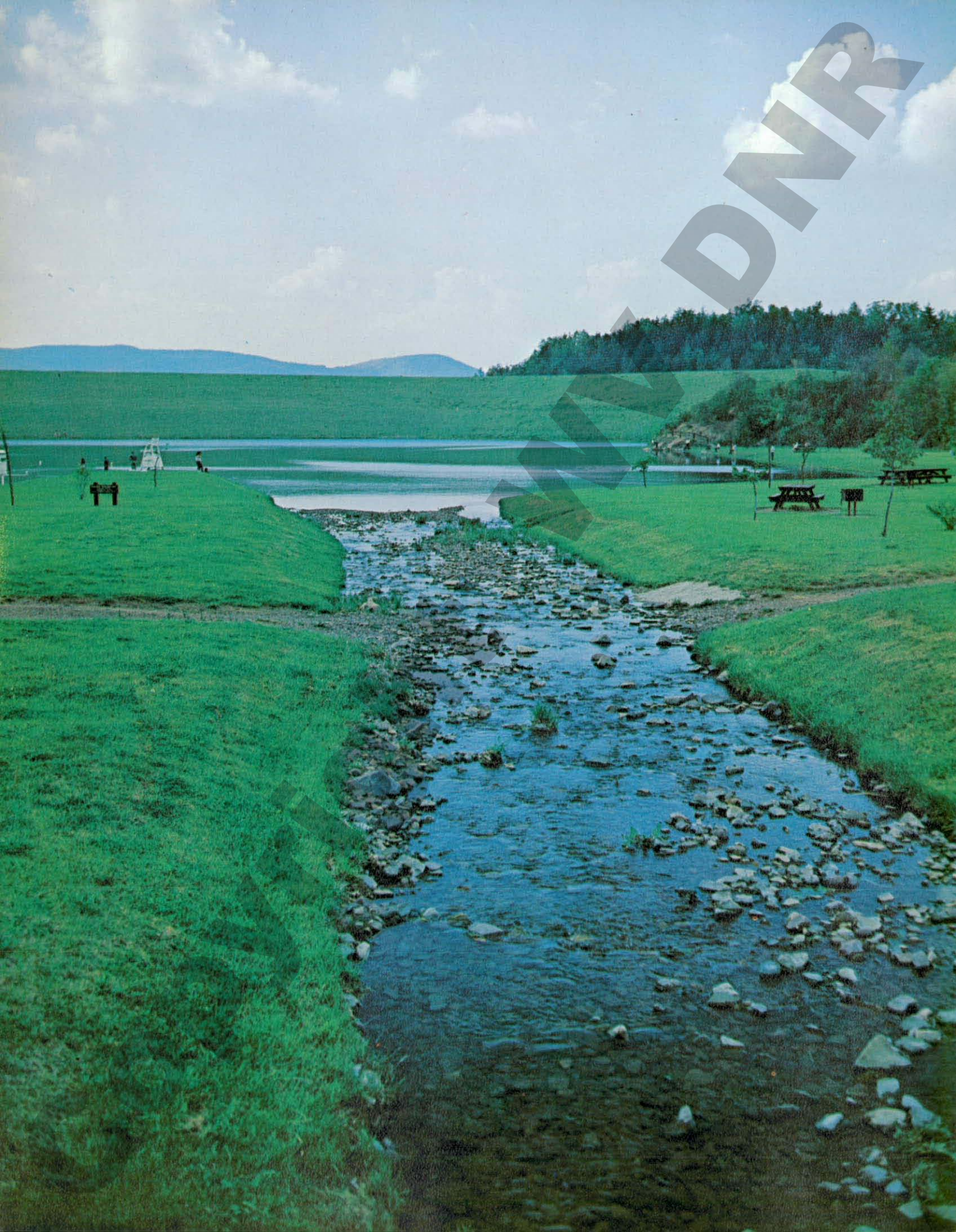

DNR

MAKE YOU THINK OF CHRISTMAS? OF MOUNTAINEERLAND? OF GIVING? Then give relatives and friends Wonderful WEST VIRGINIA for Yule gifts.

Dam at Brandywine Recreation Area, George Washington National Forest, Pendleton County.

ARNOUT HYDE JR.

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FOREST FIRE SEASON MAY BE CRITICAL

Few people, unfortunately, realize the serious devastation left in the wake of forest fires: sterile soil, erosion, stream pollution, loss of wildlife habitat, air pollution and destruction of timber. Fighting these needless fires is a weary and backbreaking task, and always costly.

Meteorological records indicate a period of low rainfall every 10-12 years. To put it simply, those of us who are charged with the prevention and suppression of forest fires are worried that this fall may be the year for low rainfall, based upon records of the past.

Last year, woodland fires destroyed 63,165 acres in West Virginia. While any figure for acres burned is serious, 1952 was one of those disaster years when forest fires burned 638,000 acres—a cyclic low rainfall year.

Consider, for example, what woodland fires might do to the Kanawha Valley which already has one of the worst air pollution problems in the nation. In 1952-53 and 1964, heavy smoke added to the smog in the Kanawha Valley, restricted travel on airlines, highways, and caused serious problems to people with respiratory ailments. Needlessly caused forest fires in this area alone could be disastrous.

The really frustrating thing about forest fires is that 99% of the fires are caused by the negligence and carelessness of people—men, women and children.

In the field of natural resources management, the threat and destructive results of forest fires are the most unmanageable and unpredictable task annually faced by professionals in forestry, soil conservation and wildlife management.

Only people—not the professionals—can prevent the yearly holocaust of woodlands fires so destructive to the beauty and assets of the Mountain State.

Please don't set our woodlands afire. Outdoor West Virginia belongs to you, too.

IRA S. LATIMER JR.

Destructive forest fires annually devastate beauty like this in West Virginia.

ARNOUT HYDE JR.

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October sun blushes at fall's bright colors.

ARNOUT HYDE JR.

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