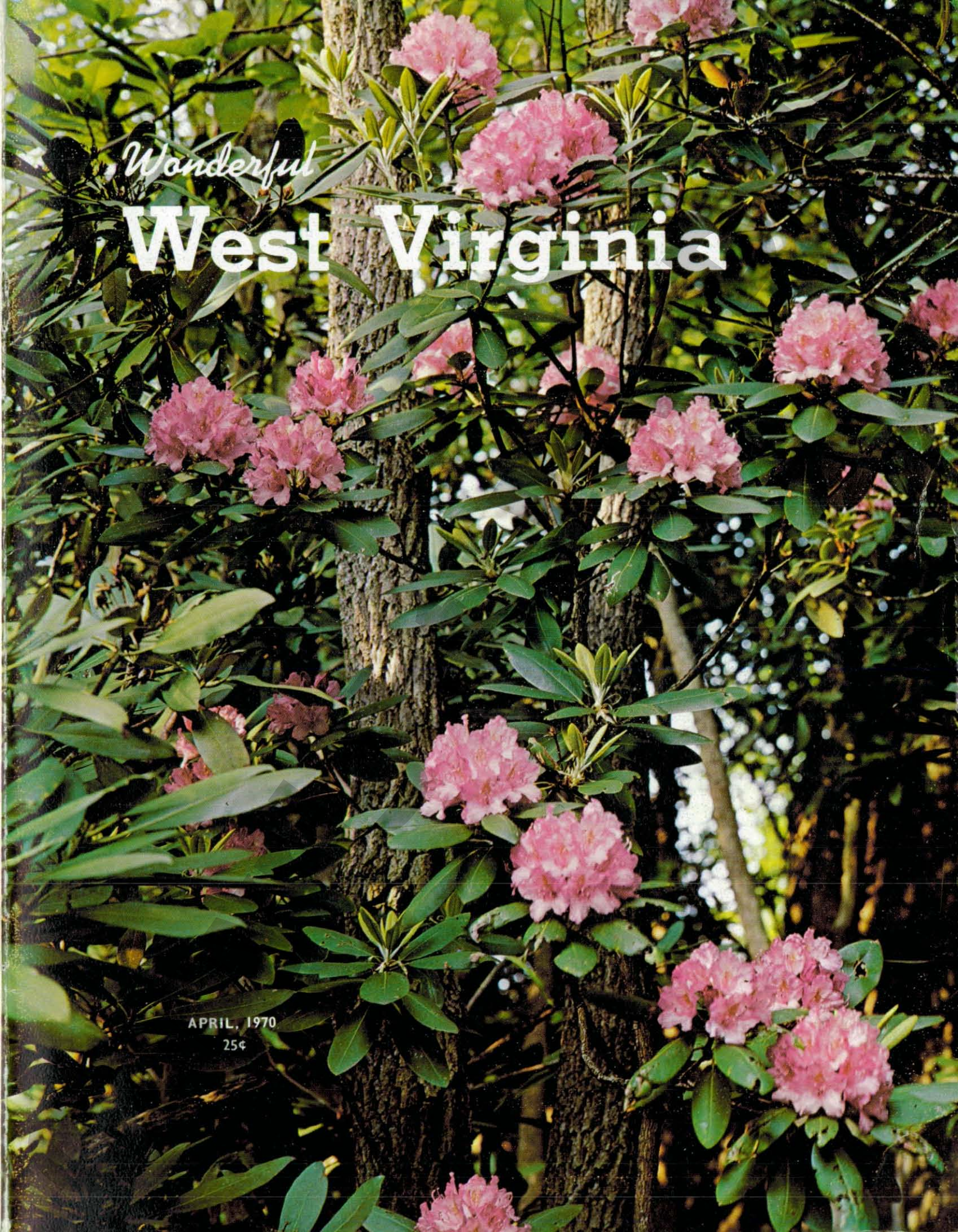
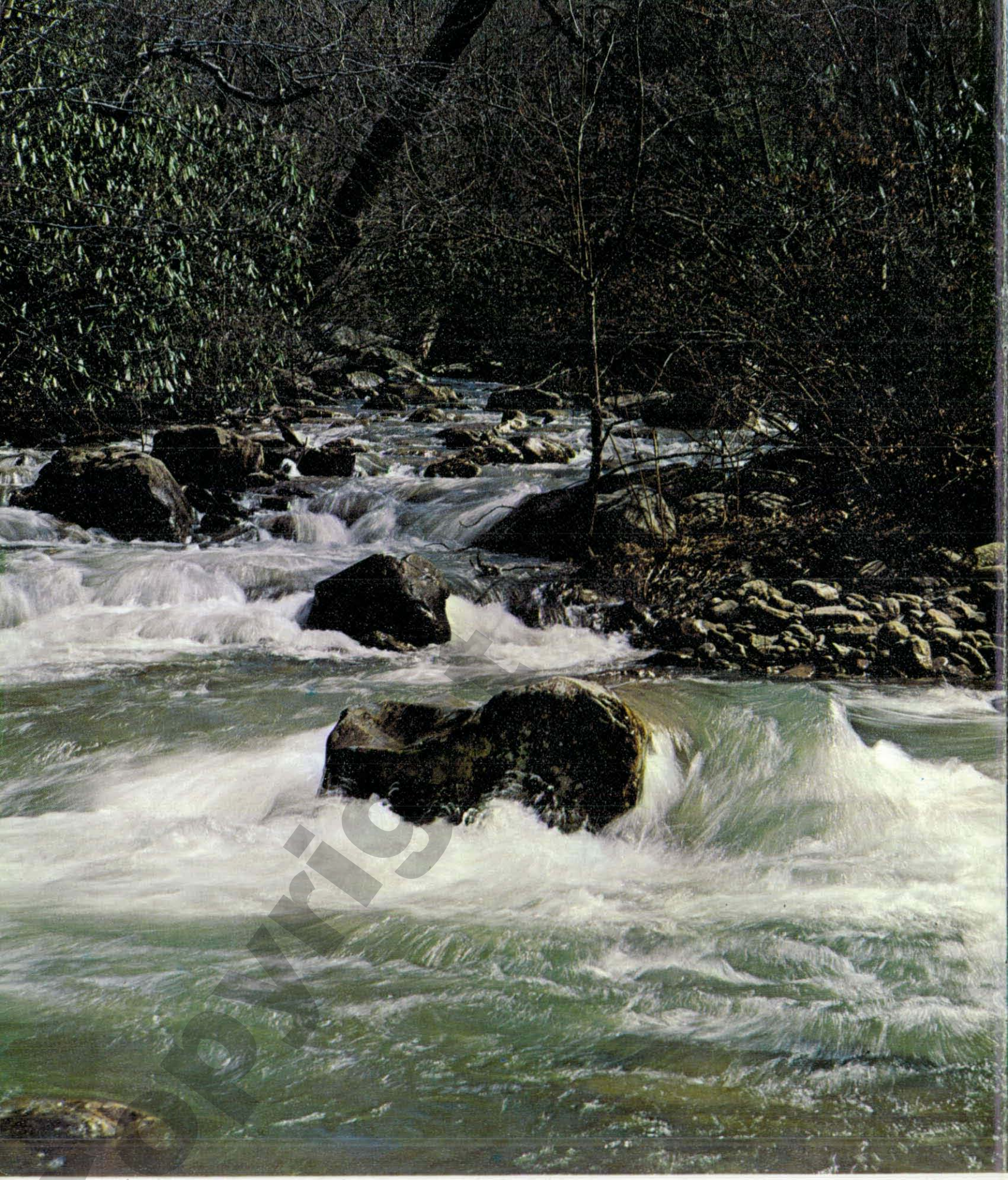

Wonderful
West Virginia
APRIL, 1970
25¢



ARNOUT HYDE JR.

Rough going for hardy trouters. Lower Glade Creek in Babcock State Park, Fayette County. Requires five-mile hike to this, down old log road.

Copyright

State of WEST VIRGINIA

Arch A. Moore Jr.
Governor

DEPARTMENT OF NATURAL RESOURCES

Ira S. Latimer Jr.
Director

•

EDITOR
Ed Johnson

•

Associate Editor
Frank Hill

•

PHOTOGRAPHER
Arnout Hyde, Jr.

•

COMMISSIONERS

LAWRENCE DEITZ, Richwood
ROY J. ALLEN, War
RICHARD K. VANZANDT, Huntington
PAUL K. YATES, Ronceverte
CHARLES L. CLEAVENGER, Fairmont
EDWIN G. POLAN, Huntington
CHARLES ROBERT HOOTEN JR., Charleston

PRINTED BY
FAIRMONT PRINTING COMPANY
FAIRMONT, WEST VIRGINIA

Dedicated to the wise use of West Virginia's renewable natural resources.

VOLUME 34 APRIL, 1970 NUMBER 2

FEATURES

Brief History of Angling 2
VERN ERICKSON

Who Mourns for Logan? 7
JOHN W. HANSFORD

Pipestem's Promising Playground 12
ED JOHNSON

Sportsmen 'Play by The Rules' 16
DICK NEAL

Women in Conservation 20
MAXINE SCARBRO

Poppers That Produce 22
RALEIGH BOAZE JR.

Hunting in The 1970s 25
JOHN MADSON & ED KOZICKY

Insectivorous Plants 27
EARL L. CORE

West Virginia Streams Could Be Model for Nation 28
IRA S. LATIMER JR.

COVER: Purple rhododendron, Grandview State Park. These showy flowers bloom in June. Photo by Arnout Hyde Jr.

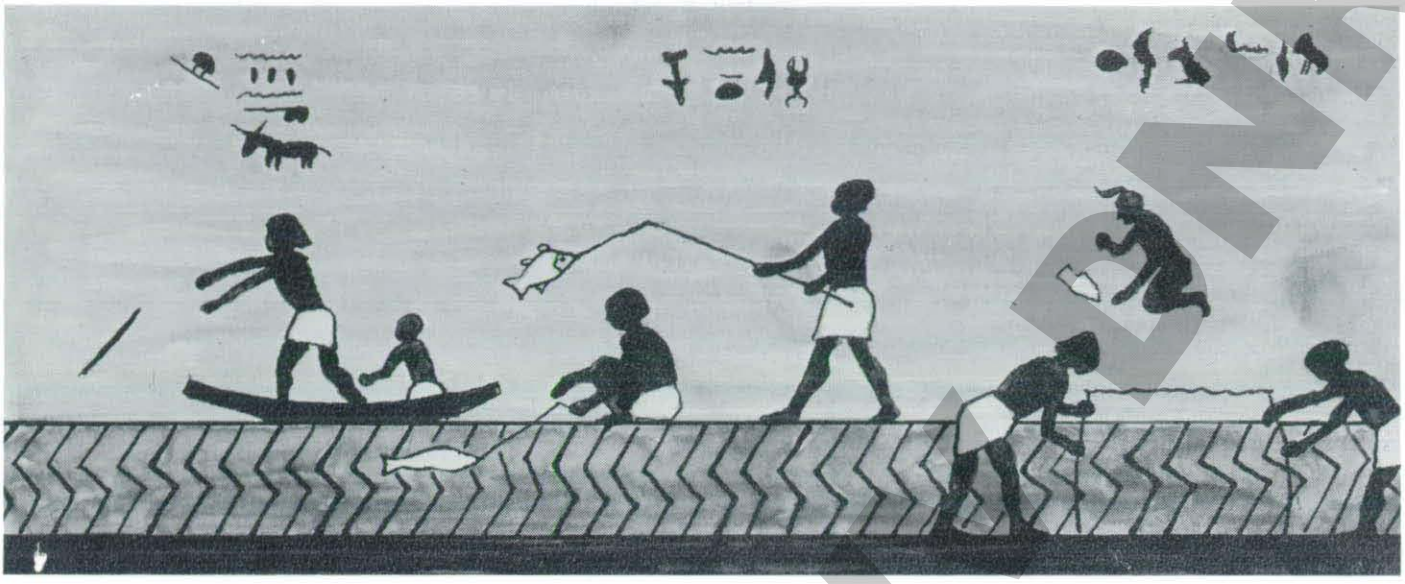
PUBLISHED monthly by the West Virginia Department of Natural Resources. Subscriptions are $1 for one year, $5 for three years—payable in advance by check or money order to West Virginia Department of Natural Resources.

In giving notice of change of address, include expiration date, old and new address. Allow 5 weeks for subscription, renewal or change of address to become effective.

Entered as second class mail at the post office at Charleston, W. Va. Permission granted to reprint with credit to WONDERFUL WEST VIRGINIA, Department of Natural Resources.

Address communications to Editor, WONDERFUL WEST VIRGINIA, Information & Education Division, State Department of Natural Resources, State Capitol, Charleston, W. Va. 25305.

Copyright WV DNR



Earliest known pictorial record of fishing with rod and net, from an Egyptian tomb.

brief history of angling

VERN ERICKSON

Paintings by the author
Reprinted from North Dakota Outdoors

Of the millions of fishermen throughout the world, past and present, with their varied environmental styles, techniques and equipment, how many of them gave thought as to when fishing actually began? When did man begin studying his world around him, and when did his urge to dominate fishes originate? What did he look like and how was it done? What condition took place to trigger the exploration of hook, line, rod, of luring and capturing this vertebrate creature of the deep? One can only whet his imagination on this mysterious subject of when fishing got its start.

About 50 million years ago, great numbers of fish lived in vast bodies of water that once covered many parts of the world. Over the years, deposits, consisting of the natural environment of dead plants and animals, settled on the ocean floor. Today this geological formation is called sedimentary rock. Fossil fish have been found in sedimentary layers in many parts of North America.

We know fish lived eons ago, but when did prehistoric man begin to catch them?

An Egyptian tomb depiction, dated 2000 B.C. shows the earliest known pictorial record of fishing with a rod and net. Interesting is the fact that some of these early Egyptian representations list 200 kinds of fish, a dozen of which can be identified today.

During the Neolithic stone age, about 7000 years ago, man learned to polish stone and make tools of flint and bone. He chipped from raw flint hooks and gorges. With precise craftsmanship, these implements became more refined as time progressed. Man invented spears, traps, bows and arrows, gorges and hooks. The gorge, a short splint of bone or flint, was needle sharp at both ends. The line was tied to its middle as was the bait. This type instrument had to be swallowed by the fish. Later man realized that with a slight bend and barbs he could snare and retrieve with better results. Thus came into being the hook.

Gorges and hooks were made from various natural materials. The American Indian produced elaborate hooks of many designs and sizes.

The grooved technique was used in attaching the line to the bone hook, a method to prevent slippage. Hooks were made from animal bone, mostly deer. The early Indian made other types of fishing gear such as the gaff and spear.

(continued on page 4)

Copyright WVBNR

ARNOUT HYDE JR.

South Branch of the Potomac River along Rt. 28 in Pendleton County.

Copyright

Hardwood was used for the spear. A sapling was peeled of bark, and serrated with large teeth.

The Eskimo used a different type gear than most fishing people of the world. His pole was a small piece of driftwood shaped flat with notches on both ends. The line could then be wound for easy portability. The line was of whalebone baleen, a flexible strip that is used for the straining of food in the animal's mouth. Hooks were carved from bone ivory resembling fish or shrimp.

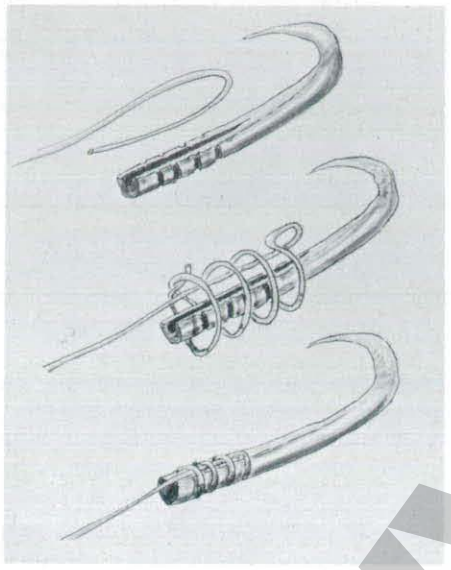
During the beginning of the metal age, about 5000 years ago, man discovered how to produce copper. By heating, stretching, bending, and twisting, he created hooks of many shapes and sizes. This era of man became an important phase in his environmental existence.

The fishing rod probably came into being sometime during the age of metals. There are pictorial accounts of fishing with rod dated almost 4000 years ago. The jointed rod was known to have existed during the Roman Empire. These were made of hollow reeds or canes and joined together many times, depending on length desired. These people also used artificial flies made of wool and feathers, apparently for trout.

As time went on, fishing became as much sport as an important sustaining diet. Rods became more and more advanced. Special woods were being used. Fishing tackle in general began to show signs of creativity.

Around 1500 A.D., fishermen became more aware of the sporting challenge of angling. Skill was tested with long rod and light line, casting for accuracy, playing the wind and employing the right lure. All these factors became part of this outdoor game—the game of enticing and capturing the wary one in the deep below.

In England, around 1650, the reel became a prevalent piece of equipment. Fishing tackle was being made to accommodate the interested sportsman. Hooks were made out of imported needles, fashioned by the angler to his desires. The needle was heated, bent and cooled. His skill in fly-



Old but effective method of attaching line to bone hook.

making grew. Rods began to taper.

The evolution of fishing continued through the years. Sportsmen grew in numbers. Manufacturers began to flourish. Publications and articles of "How To Catch The Big One," and golden moments of an inspiring tale in a fast running stream, were recorded with precise detail.

In the early 1900's, telescopic rods were being made, and split bamboo and steel rods advertised flexibility, toughness, and long service. Fish line of all kinds was produced as well as lures to attract all species of fish. Spinners, wobblers, and plugs of all shapes and sizes appeared. The reel became free spool, anti-backlash. One 1935 magazine advertisement relates a happy angler as saying, "My Marhoff is twenty-five years old this year and it runs as sweet as it did the day I bought it."

By the mid-1900's, reels used were precision built. Individual owners could take apart and clean their own gear. An adjustable drag was in use.

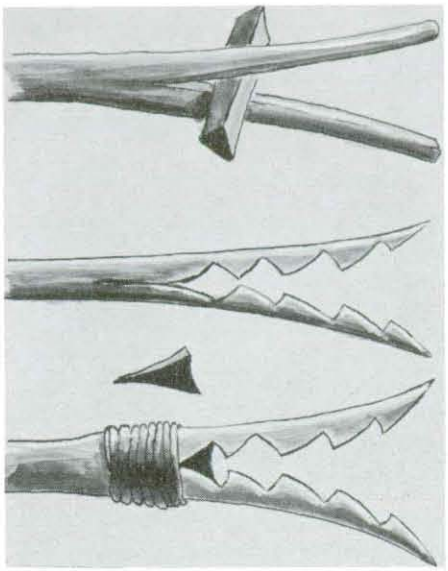
The open-faced spinning reel was being used more. Fishing rods such as fiberglass were now gaining in popularity.

In the early 1960's, monofilament line was being manufactured as well as nylon. Today, line for all types of fishing is on the market—oval-shaped for bait casting, floating line for fly fishing, lead-core for trolling and salt water line for deep sea fish species. Equipment today is made of the highest quality, rods balanced for proper action, guides of the right placement and wrapping. Makers of fishing gear offer and suggest specific combinations to suit the buyer's personal taste—as to type reel, lure weight, line test and length of rod. Extra spools of line can be carried for quick-changing to any spinning situation. Parts and accessories are made for all tackle, ready at the fisherman's request.

Fishing today is done in many different ways in all parts of the world. In Portugal, large boats manned by about 70 men await on shore for the incoming tide. The receding waves pull the vessel to the open waters for harvest of vast concentrations of sardine. In the Amazon reaches of South America, natives fish standing motionless with bone-tipped spear and bow. With precision marksmanship they capture their prey. Tribesmen build weirs over rapids on which crude scaffolds are attached. Large funnel-shaped baskets are dropped into the rushing water, weighted by the native. Fish getting into these traps cannot escape because of the current and are then retrieved. On the Nile River in Egypt, fishing is often done by net. Their tub-shaped boat is made of papyrus and waterproofed by bitumen, an asphalt substance. In the Fiji Islands the popular method of fishing is with spear. The Fijian awaits motionless on the coral-lined shore for a passing morsel, then with extraordinary accuracy captures the fish.

Going back in time, the Indian of the Northwest built perches adjoining waterfalls of rivers that run to the sea. From these high, over-hanging platforms, they speared the migrating salmon that fought their way to the ancestral breeding grounds. The plains Indian of early America, such as the Mandan that inhabited Missouri River sites, constructed a palisade-type trap. This device was completely enclosed and trapped fish

Copyright WV DNR



Three steps in making ancient fish spear.

were captured with a small conical reed enclosure.

In North America today, the beautiful and gentlemanly sport of fishing is with the fly rod high in a mountain stream, testing the angler's skill against nature. The most popular way Americans fish today is with the boat and motor. Millions of men, women and children retreat to the waters for fun, relaxation and love for the outdoors. Fishing today, like an incurable disease, has spread to become one of the nation's most favorite pastimes. Fishermen far exceed the number of hunters.

With the expansion of human population, the sport and recreation of fishing must be managed to safeguard its continuance. Fish scientists state that today's fish abundance will prolong the existence of man longer than any other wildlife resource. This is, of course, with the cooperation of world fishing industries. Distressing is the fact that there is a constant struggle between fishing nations competing in commercial harvest of the vast ocean.

Modern-day commercial fish crews use many methods of harvesting. Various nets are used, such as the purse seine. This type net completely surrounds a school of fish. Tuna fish are most often taken with this net. It works like the drawstring of an old-fashioned purse.

Another type is probably the most common of commercial nets, the trawl net. This net is used in deeper water where fish, such as cod, are found. The drift net is used for near-surface dwellers, such as herring and mackerel. This type is suspended from floats on the water's surface and may stretch for as much as three miles.

As the world population increases, the demand for fish increases. Fishery biologists warn that the billions of fish that live and reproduce in water the world over are being over-harvested. Many fishing nations are working for better management and cooperation in fish harvesting international waters. A good example is the agreement between Canada and the United States for protection of the sockeye salmon throughout the breeding season.

Over the last half-century Federal and State fish hatcheries have developed a high and complex niche in society. Where once areas were devoid of fishing recreation, anglers now are busily contesting for trophy records.

The evolution of fishing has modified into many fields, some of everlasting pleasure and golden moments.

Fishing! The wonderful world of fishing . . . when did it all begin? One can only imagine when this sport came about. That day, that particular day, the two-legged creature perfected the technique to capture the elusive denizen of the silent, watery world below.

Groundhog up a tree. Ordinarily a ground-scamperer, photographer Leonard Lee Rue caught this whistlepig up a sapling.

COPYRIGHTED

ARNOUT HYDE JR.

As spring stirred on jeep-only road near Pickens in Randolph County.

Chief Logan frequented what is now West Virginia, where a county and city bear his name.

WHO MOURNS FOR LOGAN?

This drawing of Logan, Mingo Chief, was made from a bronze plaque in the lobby of the Chief Logan Motel, Chillicothe. It shows him in the ceremonial battle dress of the Ohio Mingoes, as he appeared about the time of his "speech."

JOHN W. HANSFORD
Reprinted from The Wonderful World of OHIO

HISTORY HAS BEEN KIND to its great orators: witness Massachusetts' Daniel Webster and Kentucky's Henry Clay. But both Webster (who, legend has it, could out-talk the devil) and Clay (the Great Compromiser) were known for the quantity as well as the quality of their speechmaking.

Ohio's pre-statehood history tells of a man whose one recorded "oration," consisting of less than 200 words, has been guaranteed a prominent position among the great speeches of all time, according to not less an authority than Thomas Jefferson.

The speech was not delivered from a platform, and no great throng was present to hear it. Most accounts agree that the speaker stood beneath a magnificent old elm tree and spoke only to one man, an emissary from the Royal Governor of Virginia. The time was the autumn of 1774, and the speaker was Logan, a Mingo chief.

It was not a speech in the conventional sense, but a message of

COPYRIGHT WVDNR

pathetic eloquence delivered to Logan's friend, John Gibson, an aide to Lord Dunmore, the colonial governor of Virginia. Gibson had been sent to find Logan and convince him to join other Indian leaders at the peace conference following the Indian wars, which culminated in the Battle of Point Pleasant.

Lord Dunmore, whose Virginia domain extended through what is now West Virginia, Kentucky and Ohio, had set up camp in present-day Pickaway County, a few miles from the villages of the Shawnee, Cornstalk, and his sister, the Grenadier Squaw. The governor called his headquarters Camp Charlotte and designated it as the site of peace negotiations between the British and Indian forces. Colonel Lewis, victorious at Point Pleasant, led his armies back to meet with the forces of Cornstalk, whose Indian confederation was defeated at the decisive battle on the Great Kanawha River.

Logan, chief of the Mingoes in the upper Ohio valley, actually had not taken part in these wars. But his counsel was so respected by the white leaders that his signature on the Treaty of Charlotte was considered necessary for any future peace.

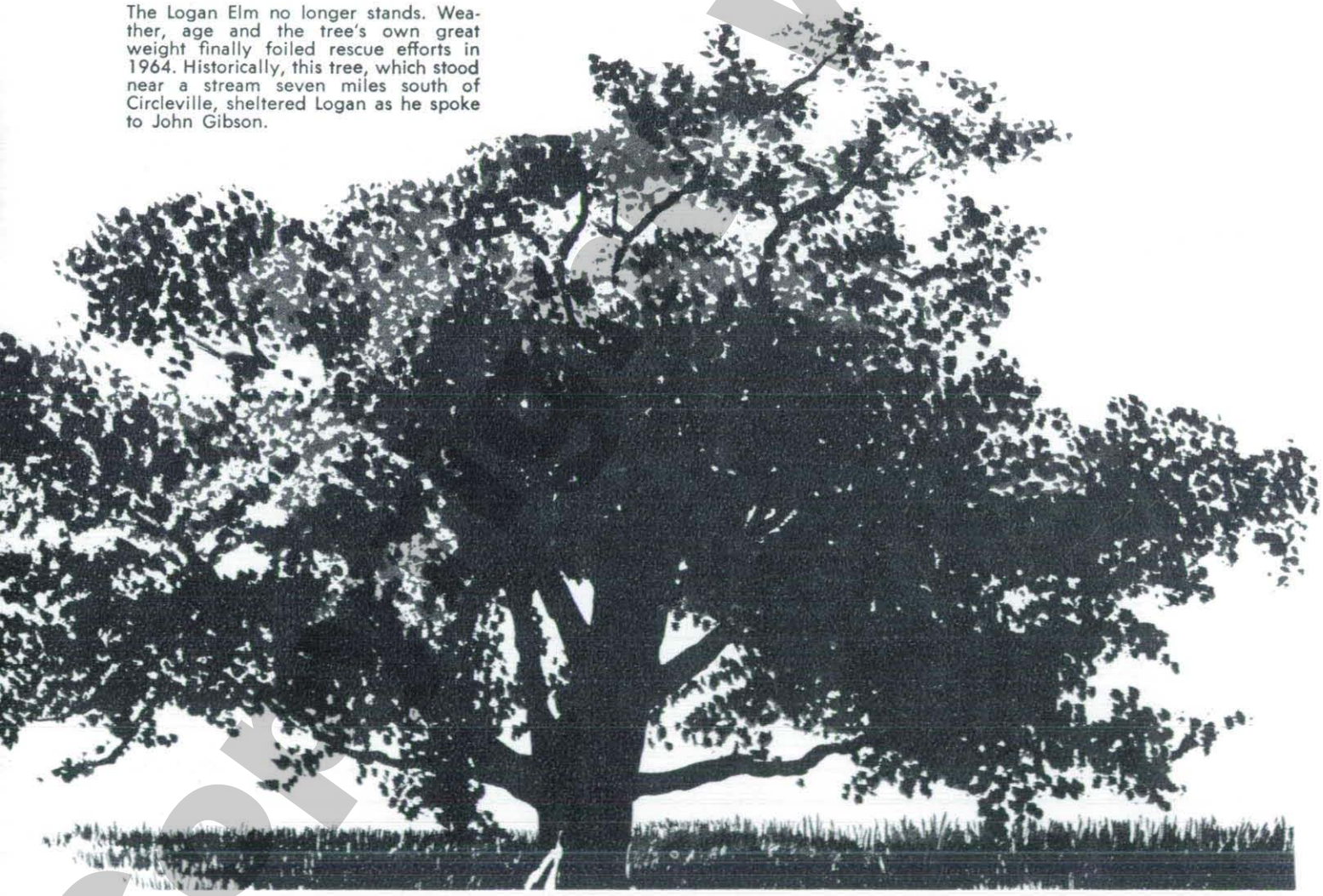
Chief Logan, whose Indian name was Tah-Gah-Jute, was born in New York state in 1725, the second son of Shikellamy. Logan's father was believed to have been either a white man (probably a French-Canadian) or a halfbreed. His mother was a squaw of the Iroquois nations, probably a Cayuga.

After his father's death, Logan (named after James Logan, a friend of William Penn) became chief magistrate of all the Iroquois tribes as far west as the limits of the Allegheny watershed. Besides his position of influence, he inherited from his father a benevolent nature, a love for peace and a friendship for the white man. He gained the respect of many colonial leaders during his years in Pennsylvania and won a reputation for hospitality, honesty and kindness.

Logan married a beauty named Alvaretta after the death of his first wife and children. Alvaretta was probably a Cayuga, but some authorities believe she was a Shawnee, which would explain Logan's friendship with the great Shawnee leaders of the Ohio country.

The leaders of both Indian and white civilizations were numbered among the friends of Logan. He had council with Tecumseh and Cornstalk, both Shawnee chiefs, and Captain

The Logan Elm no longer stands. Weather, age and the tree's own great weight finally foiled rescue efforts in 1964. Historically, this tree, which stood near a stream seven miles south of Circleville, sheltered Logan as he spoke to John Gibson.



COPYRIGHT WVDP

White Eyes, Delaware chief. He befriended frontiersmen Simon Kenton and Simon Girty. He was respected by George Rogers Clark and Arthur St. Clair. And he had won the trust and friendship of the Moravian bishops Heckwelder and Zeisberger. In fact, the Reverend David Zeisberger had married Logan and Alvaretta in his church.

The Christian Logan won fame as one of the first of the great mediators and peacemakers. He urged his fellow Indians to cooperate with the ubiquitous white man, in order to win a place in the American civilization. He envisioned a society in which both red and white man would live in peace, each adopting the virtues and scorning the vices of the other.

The Scioto River Valley became his home in 1770. His small group of Mingoes built their town near the villages of Cornstalk and the Grenadier Squaw, on the line between present-day Pickaway and Ross counties. Logan was not a tribal chief, but a headman of members of the Iroquois nations living apart from the lands of the confederacy. These outlying parties of Iroquois were called Mingoes.

Early writers spent much time describing Logan's character and demeanor, but they did not ignore his physical appearance entirely. One pioneer's account says Logan was handsome, over six feet tall, straight as a spear and "the best specimen of humanity he ever met with, either white or red."

Those who trusted him included the pioneer wives and their children. Once, when he was waiting in the home of a magistrate for a decision on a grievance, he passed the time by playing with the official's daughter, who was just learning to walk. The mother remarked that she was unable to buy shoes for the child to help her walk better. When Logan left, the child, spoiled by his attentions, wanted to go with him. It is evidence of his reputation that the mother granted him permission to take the child to his village for the day. Toward nightfall, she began to worry; but just at dusk, Logan, true to his word, came through the woods with the child on his shoulders. On the little girl's feet were neatly crafted moccasins, ornamented with beads. He had spent most of the day making them.

This idyllic existence, based on the mutual trust and respect between Logan and the white settlers, ended abruptly and tragically. His only sister and last surviving brother were killed in the infamous Yellow Creek Massacre by a group of renegade whites led by Daniel Greathouse. Logan wrongly believed in his grief that Captain Michael Cresap, a well-known frontiersman who had led reprisal attacks against groups of renegade Indians, was responsible for the deaths of his family.

Logan and his wife had had no children, and his ties with the rest of his family were strong. His grief was enormous, and his desire for revenge could not be placated.

From his camp near the Scioto River, he began a series of attacks on white settlements. He made it clear from the first that his raiding party was not waging general warfare, but a personal vendetta directed against the man he thought responsible for his grief.

The renegade Indians continued in their attacks against the whites, using Logan's campaign of vengeance to justify their terrorism. The Shawnee nation, who had always resented the encroachment of the white settlers, now began to wage war in earnest. Thus began the Indian uprising which became known as Lord Dunmore's War. Logan was an example for his Indian brothers in peace and war.

When peace talks began, the white leaders knew that agreements without Logan's participation were futile. So Lord Dunmore sent John Gibson, a friend of Logan, to persuade him to attend the talks. (Gibson was reportedly the father of a young survivor of the Yellow Creek Massacre, the daughter of Logan's sister.) Colonel Gibson met with Logan, heard his message to the white man and translated it literally for delivery before the conference.

Lord Dunmore himself read Logan's "speech" to the assembled soldiers and Indians, among whom were George Rogers Clark and Captain Michael Cresap. The latter was angered and saddened to find that Logan believed him to be a murderer of children and squaws, and vowed to clear himself by seeing that Greathouse received the punishment due him.

The famed speech was not an acknowledgement of defeat, nor an expression of desire for peace; it was a pathetically eloquent recital of the wrongs done him and his people by white men, in spite of his loyalty and friendship to the whites. It was a fervent and dignified justification of the vengeful actions he had taken since Yellow Creek.

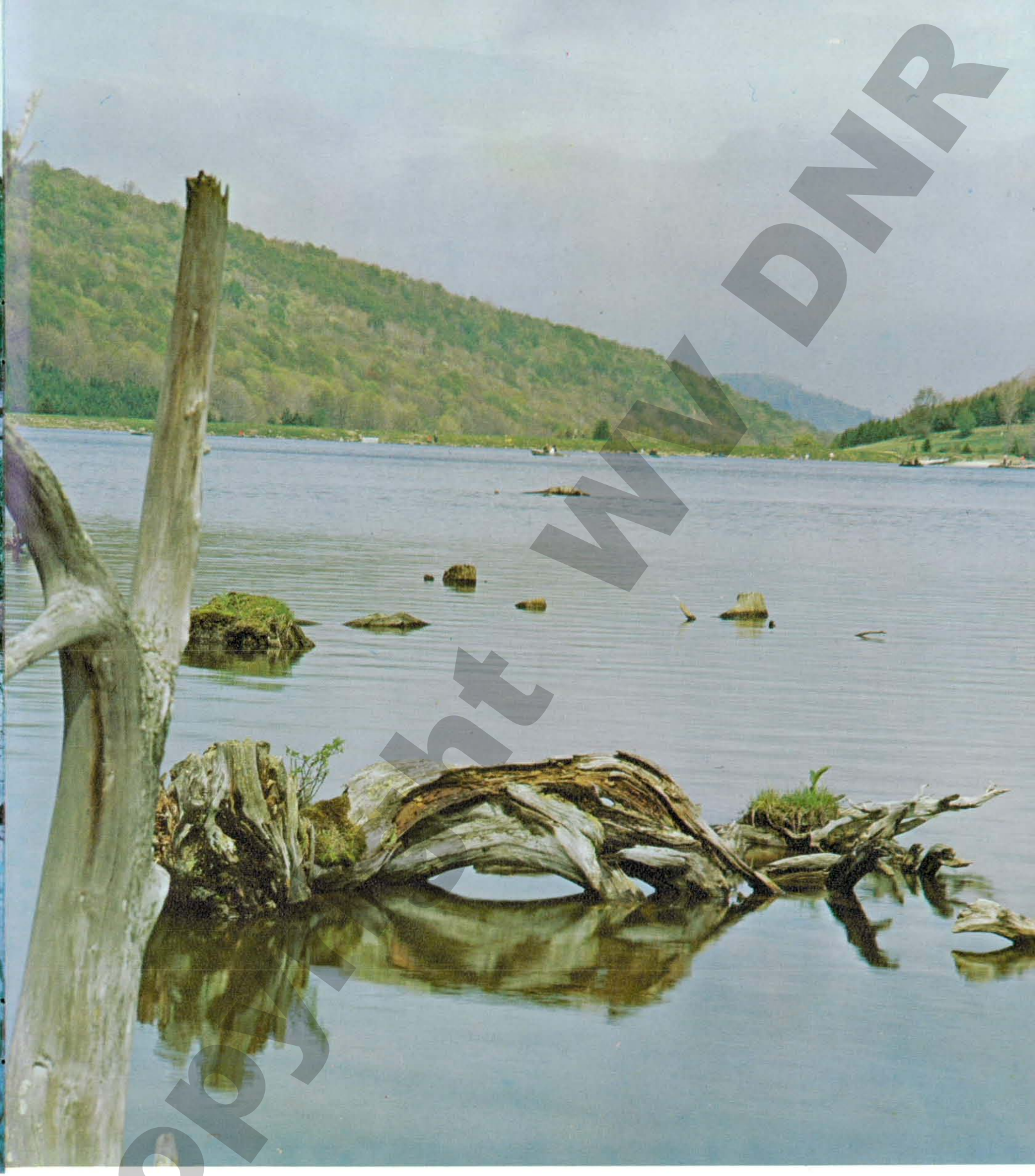
Logan never recovered from his anger and grief. He grew moodier and more isolated. Occasionally his old nature came out, as when he twice saved the life of Simon Kenton at the risk of his own. Some say he died a shameful death at the hands of one of his own people, possibly his nephew. But at least one account says that he was murdered by a party of drunken whites. For a brave and noble savage whose fate in the hereafter depended upon the deeds of his lifetime, this latter account would be kinder to him and to those who do mourn for Logan.

Copyright WVDNR

The Message of Logan
1774

"I appeal to any white man to say, if ever he entered Logan's cabin hungry and he gave him not meat; if ever he came cold and naked and he clothed him not. During the course of the last long and bloody war, Logan remained idle in his cabin, an advocate for peace. Such was my love for the whites that my countrymen pointed as they passed and said 'Logan is the friend of White men'. I had even thought to live with you but for the injuries of one man. Colonel Cresap, the last spring in cold blood and unprovoked, murdered all the relatives of Logan: not sparing even his women and children. There runs not a drop of my blood in the veins of any living creature. This called on me for revenge. I have sought it: I have killed many. I have fully glutted my vengeance. For my Country I rejoice at the beams of peace. Yet, do not harbor the thought that mine is the joy of fear. Logan never felt fear. He will not turn on his heel to save his life. Who is there to mourn for Logan? Not one."

Copyright WV DNR



ARNOUT HYDE JR.

Spruce Knob lake is magnet for recreationists, anglers. Near the state's highest peak, Spruce Knob, it is reached by good U. S. Forest Service road.

Copyright WV DNR

PIPESTEM'S PROMISING PLAYGROUND

ED JOHNSON

•see pages 14-15

WITH 4,000 ACRES of scenic Mountaineerland, threaded by the twisting 1,200-foot deep canyon in Summers and Mercer Counties, imaginative architects who planned tourist-luring facilities to fit the terrain—and sweetened by an investment of $13 million—you have Pipestem State Park which makes its debut this year.

If this great recreational complex—unquestionably one of the finest in the east—did not have the complete "Come-on," it is only 10 miles from huge Bluestone Lake, famous for fine fishing, water sports, and complemented by popular Bluestone State Park.

By mid-summer, Pipestem is expected to throw open its gates and say WELCOME to West Virginians and the nation.

Pipestem, along with Twin Falls, Hawks Nest, and Canaan Valley State Parks, is a part of West Virginia's multimillion dollar park expansion program.

The colorful name Pipestem is no misnomer: I remember when I literally came in on the ground floor. Architects, our own engineers, feasibility experts and surveyors were crawling over the landscape. Troy Gatrell, now park superintendent, took me down to Pipestem Creek, cut a limb from a bush which is said to have been used by Indians and early settlers as pipestems for their stone and clay pipes. The generous and round pith in the limbs make them well suited for pipes.

Ahead of everything are its golf courses, often called the backbone of convention draws, with two seasons of play behind them. A championship 18-hole and a par-3 course. On both courses, the golf course architect skillfully used the terrain and man-made lakes, valleys and trees as natural hazards. White sand bunkers complete the layout.

Lush and long tees for the professional and the novice have been carefully cultivated by two years of professional care. There are no steep holes for the short-of-breath to climb, yet every hole is a challenge. On the par-3 course, the 10,000 square-foot greens are believed to be the largest for a par-3 in the world. One thing for sure, there are no more beautiful courses in the world, including the best of Florida, Nassau, and Pebble Beach. Green fees are moderate.

One of 25 resort cottages at Pipestem, all tastefully furnished.

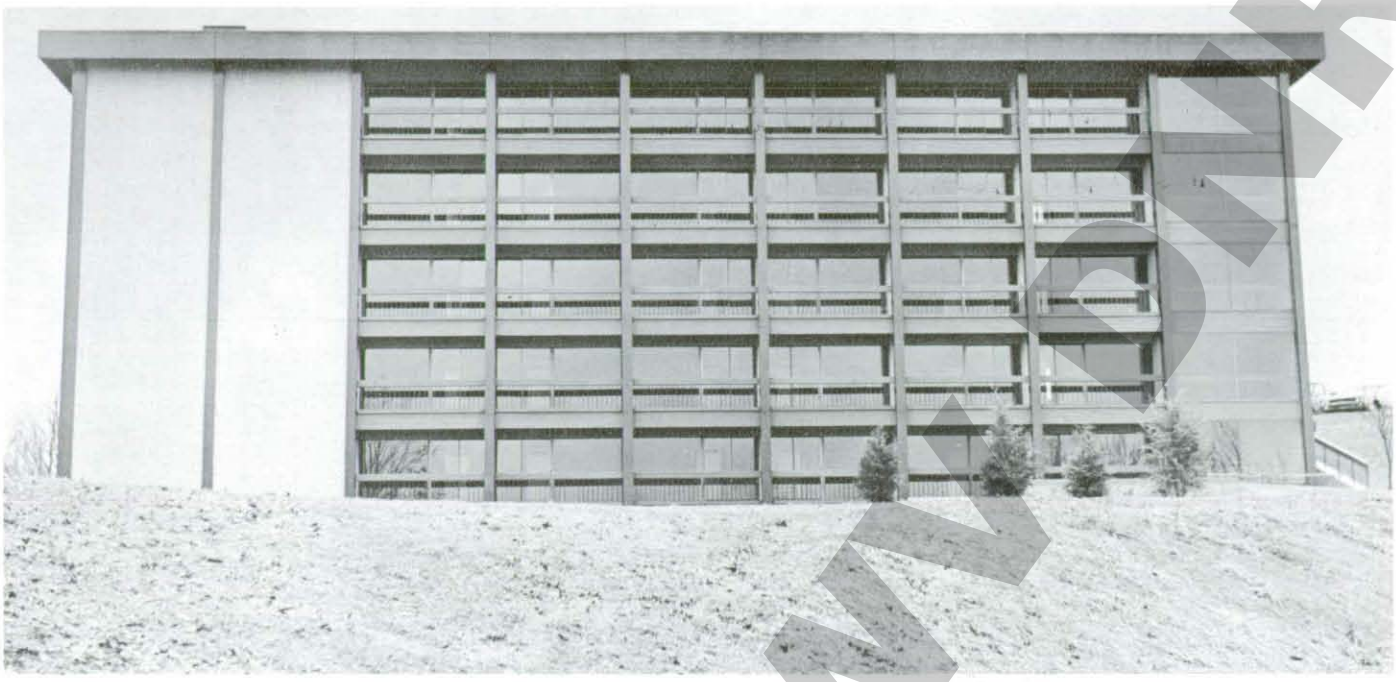
Golf course clubhouses are admittedly plush . . . well manicured, practice driving tees, putting greens. Perhaps the most distracting hazard around the courses is the incredible scenery, making it hard keeping your eyes on the ball.

HEART OF PIPESTEM is its stately 113-room main lodge. Sitting at the brink of Bluestone Canyon, the picture-window views of scenic panoramas are breathtaking. The native stone and concrete structure has two dining rooms, meeting rooms, shops, indoor swimming pool, and sauna baths.

Other facilities of the big park complex include 25 year-round recreation cottages, most of which have two bedrooms, and tent and trailer sites with comfort stations.

An intriguing addition to the park complex, expected to be in operation next year, is the Mountain Creek Lodge, a 30-room structure located at the bottom of Bluestone canyon. Access to this facility will be by aerial tramway which will sweep 3,600 feet to the bottom. Contracts have been let for the construction of the 10-car tramway. Upon completion of this river lodge, horseback riding will

COPY FROM WVDNR



End view of seven story, 113-room main lodge, largest and most modern in state park system.

be available in this secluded area along with fishing in the Bluestone River, famous for smallmouth bass.

A prime attraction of the park's recreation area is an Olympic-size swimming pool with regulation diving boards. To complete yearround recreational use, an ice skating rink is available to winter sport enthusiasists.

Other features of Pipestem include a 500-seat Ampitheater, Visitor's Center, country store, craft center, championship archery range, riding stables, 16-acre fishing lake, and an observation tower.

The average elevation of Pipestem is 2,500 feet, and with 4,000 acres there are interesting woodland trails and countless scenic views.

The park's facilities can comfortably accommodate a convention of 400. Look for Pipestem State Park, with its complete features and scenic beauty, to become one of the popular playgrounds of the east—and so handy to West Virginians. ✦

Golf clubhouse for Pipestem's 18-hole course has all modern facilities.

Copyright WVDNR

ARNOUT HYDE JR.

Golfer's only distraction is magnificent scenery on 18-hole golf course in Pipestem State Park.

ARNOUT HYDE JR.

Recreation Center at Pipestem also houses Par 3 Course Clubhouse.

Sportsmen 'Play By The Rules'

DICK NEAL

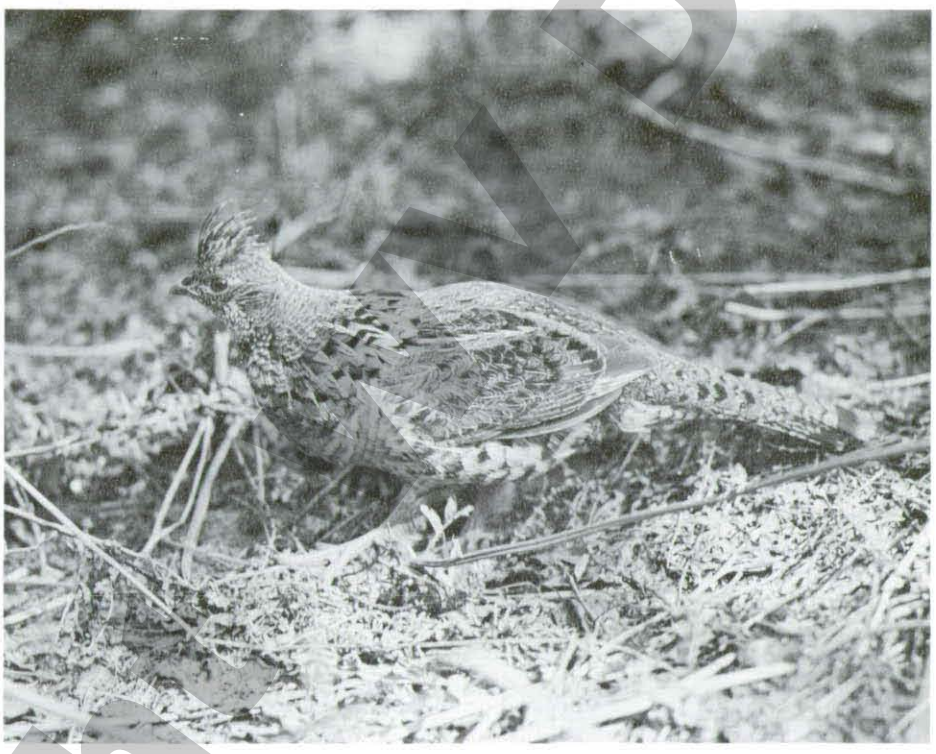
PERHAPS TEMPTATION to violate the rules or the laws is greater in hunting or fishing than any other kind of recreational activity or competitive sports. Webster gives this definition in part to a sportsman: "A person who is fair and generous, a good loser and a graceful winner." The definition of sportsman has no logical modifiers such as "good," "bad," or "real" sportsman.

Professional golf is a classic example of ethical behavior and sportsmanship. Although a thousand dollars may be riding on a single stroke, no professional would think of surreptitiously improving the lie of his ball. They play by the rules.

Not so in hunting and fishing. No state conservation department has enough law enforcement officers. It is a distressing fact that many who carry a gun or rod get their kicks from vandalism or breaking the law. Then there are that grand group of sportsmen who obey the laws, play by the rules, and keep hunting and fishing noble sports.

Of course, a person can violate the rules of sportsmanship without breaking the law; this is what separates the sportsmen from just hunters and fishermen.

On a quail hunting trip a few years ago our party was traveling in two cars along a country road. Abruptly the car in the lead stopped to allow a covey to cross the road. A companion jumped from the car, loaded rapidly, stepped to the side of the road and fired into the huddled covey on the ground and killed five birds. While he had broken no state laws, he had broken the rule of sportsmen bird hunters: "Never shoot a sitting duck." Our errant hunter bagged more quail that day than any of us but I felt the others had ten times the sport downing one bird on the wing as he did killing five on the ground.



Grouse on the ground is no shot for sportsman.

THE NEXT DAY his "birds came home to roost." Our hunting party went to the skeet range and one of our buddies had 25 clay pigeons he had bought in a box. He went to the No. 8 position on the skeet range and placed the clay targets in a stack and told our bushwhacking birds-on-the-ground quail shooter to fire into them. While this had the tact of sledgehammer, our sheepish hunting pal got the message.

Most hunters and fishermen know that they can buy choice cuts of meat and fish filets at the market for a fraction of the cost of creeling fish or bagging game in their native habitat. The huge majority of nimrods and anglers, of course, know it's the chase, the wholesome atmosphere of the outdoors that makes the sport the thing. Playing by the rules is the essence of sportsmanship.

Many sportsman anglers find their angling sport culminates in the catching and releasing of fish. Take the challenge out of hunting and many sportsmen would put away their guns.

We will always have fish giggers who will spear gamefish, when the temptation is great and the risk is small. There will always be the deer spotlighters, the vandals, poachers, pre-season hunters and the game hogs.

Thank goodness for the sportsmen who play by the rules, pay the bill, and make hunting and fishing the ultimate in outdoor sport.

COPYRIGHT DNR

Blinded by a spotlight, deer is easy shot for night-hunting vandals. Each year, West Virginia conservation officers make this costly "pastime" more unpopular.

SAYS WORLD'S LARGEST MAGAZINE . . .

Dear Mr. Johnson:

The copy of WONDERFUL WEST VIRGINIA was gone over with particular interest. You're publishing a splendid magazine—the color photography is breathtaking! Please feel free to send along copies of anything which seems promising for the Digest.

Sincerely,

Mary T. Steyn
THE READERS DIGEST
Pleasantville, N. Y.

THE GREAT ANGLER

"NO LIFE, my honest scholar so happy and so pleasant as the life of the well-governed angler, for when the lawyer is swallowed up with business, and the statesman is preventing or contriving plots, then we sit on cowslip-banks, hear birds sing, and possess ourselves in as much quietness as these silent silver streams, which we now see glide so quietly by us. . . ."—Izaak Walton

---

While our Earth is nothing but a space ship sailing along on its journey through the universe, let us keep it clean and pleasant so that the trip is tolerable.

A CONSERVATIONIST is a person who improves every trail he travels.

"MAN'S MASTERY OF THE EARTH WILL PAY HIM GREATEST TRIBUTE WHEN HE ACHIEVES THE FOREBEARANCE TO LEAVE SOME OF IT ALONE."
—Durward L. Allen, Purdue University

Squirrels are responsible for the planting of many thousands of trees each year. They bury thousands of nuts, acorns and seeds each year and forget to reclaim them.

The sparrow hawk's favorite foods are grasshoppers and other large insects.

CONSERVATION begins when a man first realizes there will be a tomorrow.

Pioneer women mixed dandelion pollen with butter to make it yellow.

Copyright WVDNR

ARNOUT HYDE JR.

Upstream boating is hard task but worth it on popular New River. This stretch of turbulent stream is in Summers County.

Copyright WV DNR

PLEASE

HELP KEEP
THE GREATNESS
IN AMERICA'S OUTDOORS

ALWAYS...

TO PREVENT FOREST FIRES:

- Get permission from landowner before building fire.
- Remove all flammable material for a distance of 10 feet from any fire.
- Stay with fire until dead out.
- Be prepared to extinguish in an instant.
- Snuff, drown, kill every spark.
- Bury charcoal embers and leave sparkless.
- Remove all flammable liquids from heat of fire.
- Crush all smokes.
- Break every match and hold until cold.
- Burn debris only on moist windless days.
- Obtain a permit to burn during forest fire season.

Last spring, 1560 fires burned 50,000 acres of forest land. Estimated damage exceeded $1,000,000.

Averages for the past five years are 1648 fires burning 56,209 acres of forest land per year. The annual damage exceeded $1,000,000.

Approximately 35% of the forest fires in West Virginia are started willfully.

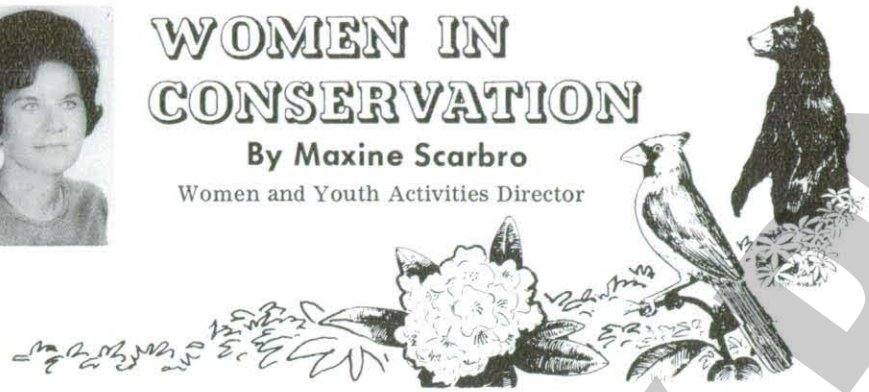
WEST VIRGINIA DEPARTMENT OF NATURAL RESOURSES

DIVISION OF FORESTRY

Copyright WV DNR

WOMEN IN CONSERVATION

By Maxine Scarbro
Women and Youth Activities Director



WEBSTER NATURE TOUR, MAY 1-3

The Webster Springs Garden Club invites you to the Eighth Annual Webster County Nature Tour, May 1-3. The Department of Natural Resources co-sponsors the event. Rustic Camp Caesar, Webster County 4-H Camp, located on State Route 20 between Cowen and Webster Springs, will be the hub for activities. Registration will begin on Friday, May 1 at 4 p.m. After dinner, Mr. William H. Gillispie will present a slide program titled "The Many Moods of Webster County Nature". Ira S. Latimer Jr. Director of the Department of Natural Resources, will attend the outing.

On Saturday morning you may choose from five different tours, all to beautiful areas. An old-fashion barn dance will close the day.

For two nights lodging (dormitory style) in comfortably heated cottages, and five meals of Camp Caesar quality and quantity—only $17.

Points of interest in the area which you may wish to visit:

The Salt Sulphur Well on Court House Square, Webster Springs, the one-time famous health water.

Point Mountain, elevation 3,872 feet, for wonderful viewing, on State Route 15, south of Webster Springs.

West Virginia Baptist Camp, off State Route 20 south of Camp Caesar.

Holly River State Park on West Virginia Route 20, near Hacker Valley, 20 miles north of Webster Springs.

Green Hills Farm, in the area of Holly River State Park, owned by Jacob Klee, a native of Switzerland.

State Game Farm on State Route 20 near French Creek.

Fish-for-Fun on Back Fork of Elk River, one mile up-stream from Webster Springs to the Big Falls.

Webster County has two of the largest trees of their kind. To dramatize the importance of forests and their products, and a prime tourist attraction for lovers of the great outdoors, the Department of Natural Resources, in cooperation with the West Virginia Centennial Commission conducted a "big tree hunt" during 1962.

THE BIG SYCAMORE, located on the Back Fork of Elk River on property of Pardee and Curtin Lumber Company, is the largest American Sycamore—Platanus occidentalis—(Buttonball, Buttonwood, American Plane-tree) in West Virginia and reported second largest of its species in the United States. It is approximately 25 feet in circumference, 89 inches in diameter, and 126 feet to the top of the crown. The tree is hollow and has an 8 foot hemlock growing in the top.

THE BLACK CHERRY—Prunus Serotina—located on the left fork of Holly River near the old Duke farm at Hacker Valley is 46 inches in diameter and approximately 120 feet tall. This tree has been saved, perhaps because it is a corner marker for the boundary line of the Sun Lumber Company.

George Brieding, right, well-known naturalist from WVU, at outing last year explains blossoms to visiting young ladies.

For further information and brochures write to:

Mrs. E. H. McCourt or Mrs. Joseph Myles, Webster Springs, 26288.

Potatoes were considered a delicacy in pioneer homes. Boiled potatoes were fed the younger children, while the older ones ate the peelings.

"The 1970s absolutely must be the years when America pays its debt to the past by reclaiming the purity of its air, its waters and our living environment. It is literally now or never."

—President Richard M. Nixon
January 1, 1970

COPYRIGHT WV DNR

Tubling - - Streamlined Tree Starting

DAVID K. McCURDY

Parsons Nursery Superintendent

A tubling is what the name implies, a seedling grown in a tube. A tubling has three major components: the outer casing which holds the soil, the soil medium which sustains the seedling, and the tree which originates from seed. When the tubling is ready to be placed in the ground, the entire unit—casing, soil, and seedling—is planted. Roots will come out the bottom of the tube and the tube will rot away in a short time.

Tubes are of two types, large cardboard tubes for large nut species like walnut, chestnut, and red oak, and small plastic tubes for pine species. Cardboard tubes, 10 inches long and 1 1/2 inches in diameter, used at the Parsons State Forest Nursery for black walnut are quite similar to the core from a roll of paper towels. Plastic tubes are 3-4 inches in length and 1/2 to 1 inch in diameter with a slit along the side to allow for root expansion.

Seedling growing time required to produce a tubling is 3 to 6 weeks depending upon the species. Nut trees produce large seedlings very rapidly, because the seedling may use the energy stored in the nut. Pine seedlings need much more time to develop into plantable tublings, because they do not have this large store of energy available.

Tublings may provide an answer to West Virginia's problem of reforesting idle land and strip spoils. In 1969, 9,733 acres of land were planted to trees. This figure includes 6,163 acres of strip spoil reclamation planting. Land is certainly available to plant trees for reclamation, and trees can be made available at the State Nurseries, but the tree planting labor supply during the short planting season cannot be increased. Many individuals plant all the trees that they want on their own land; however, the strip spoils must be planted by crews of men. With the tubling we will be able to lengthen the planting season, better utilize the tree planting crews available, and plant more trees.

In addition to the lengthened planting season, the tublings offer many other potential advantages in the nursery and in the field. These advantages will reduce the cost of raising and planting the seedlings by making the processes more efficient.

Reforestation of West Virginia's hills is of great importance to all the people for beauty, recreation, wildlife, timber, and watershed. Tublings may provide the needed supplement that will enable West Virginians to reforest idle hillsides faster.

LITTER CLEAN-UP IN FULL SWING

This is a scene from last year's clean-up on Pigeon Creek in Mercer County. A county-by-county clean-up of streams has begun throughout the state.

Copyright WVDNR

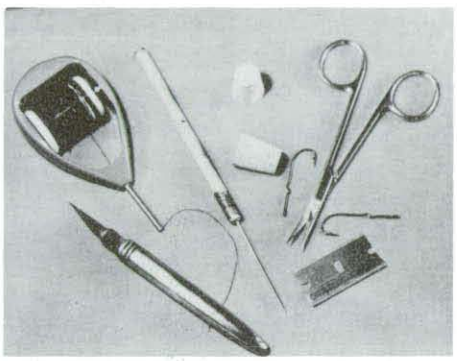
POPPERS THAT PRODUCE

RALEIGH BOAZE JR.

Most fishermen think of trout when fly rod is mentioned, for trout brought about the art of fly fishing. Yet many kinds of freshwater fish can be taken on a fly rod.

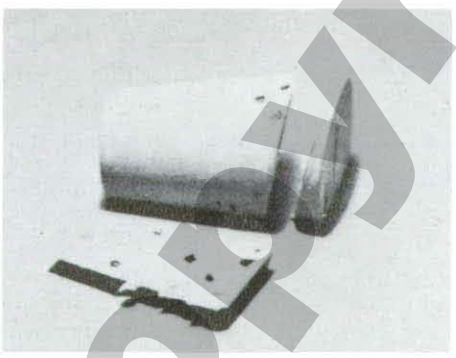
One lure in particular that has broadened the art of fly fishing is the popper. This high floating fake plays havoc with both large and smallmouth bass, finicky crappies and the belligerent bluegills.

There is no finer fishing than to wade rivers and streams armed with a dozen or so poppers and a fly rod. Before the best fishing arrives, make a few poppers. It's easy.

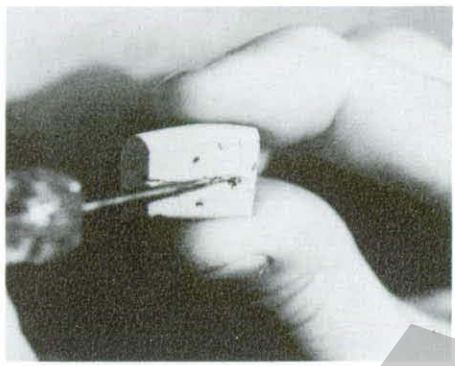


Basic equipment includes corks, hooks, thread, bobbin, bodkin, scissors, and a vise.

To start you need corks, sizes 1, 2, and 3 with hump shank hooks in sizes 6, 4, and 2. The hump in the hook prevents it from rotating inside the cork. Next, take a razor blade and cut about 1/5 of the lengthwise section of cork away so that you have a flat bottom. Then cut a slight bevel on the front, this allows the popper to be lifted off the surface of the water without any great disturbance. Following this is a slit in the bottom of the cork for the insertion of the hook.



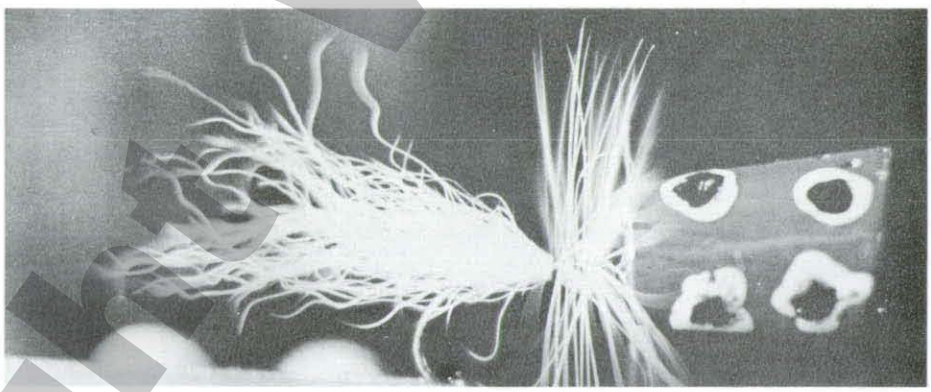
From a cork, cut a flat base and a beveled nose similar to this.



Force the cement into the hook slot with a bodkin, small nail or needle, prior to inserting hook.

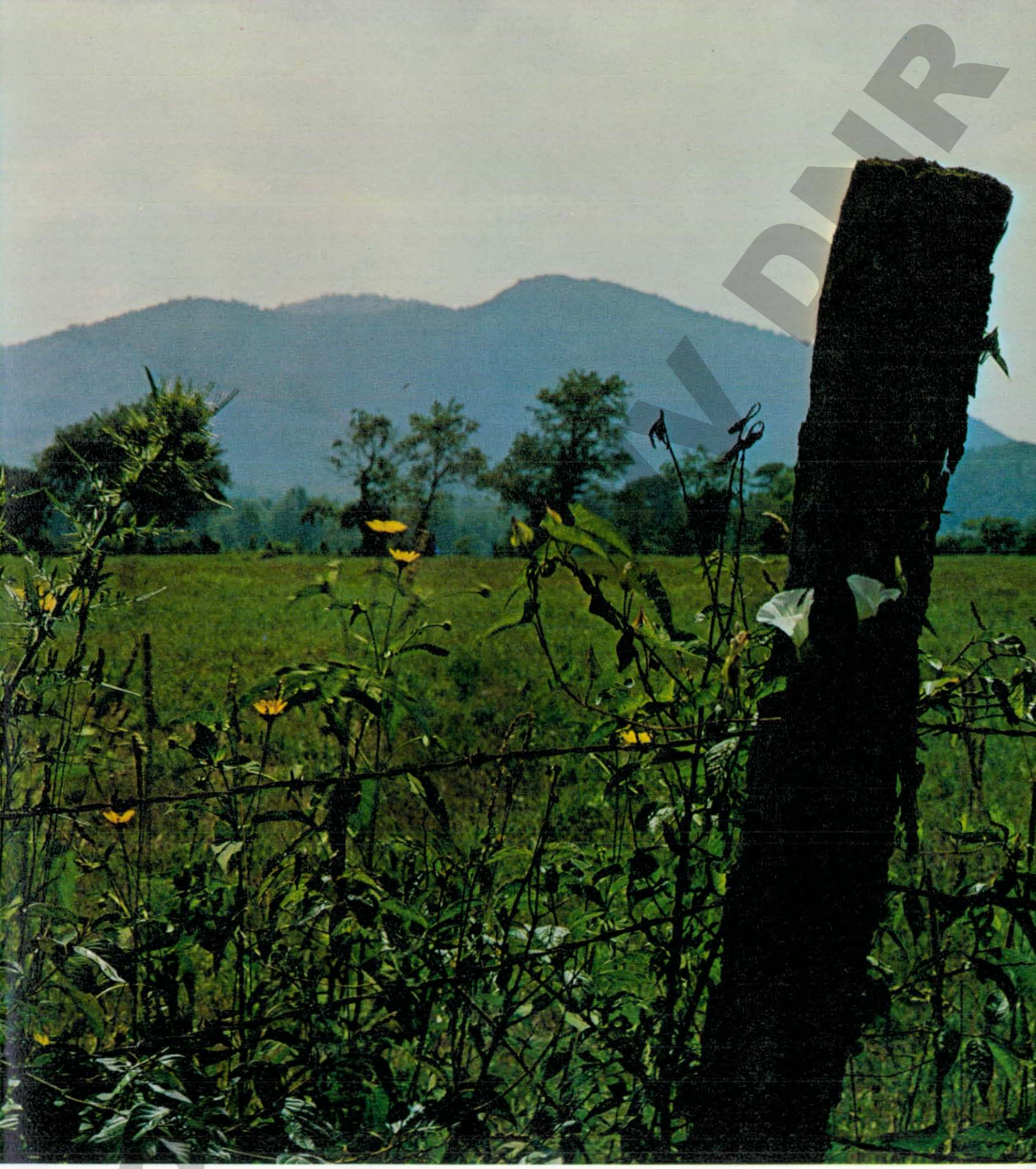
Any strong cement, such as Ambroid, will secure the hook. After forcing the cement into the hook slot insert that hook with the eye flush with the base and the shank section angled so that it exits from the opposite end at approximately 1/3 of the rear end diameter. By doing this you will cause the tail section to squat lower in the water than the front.

After the cement has dried you can apply a cork sealer and then paint. The colors and designs are up to you. Just about any color is a winner although some work better on certain days than others. Tie on a tail of hackle feathers, maribou, calf tail, squirrel tail, deer hair and complete your popper by wrapping a wisp of hackle or peacock hurl for a midsection. There you have it. The total cost was about a nickel, not counting what you paid for a vise and other inexpensive items. Cheap wasn't it? Fun too. As soon as the summer sun warms your favorite waters, go tackle the scrappers.



Model car paint, calf tail, and a hackle middle put the finishing touches on this fake frog or gaudy bug.

Copyright WVDNR



ARNOUT HYDE JR.

Early summer almost anywhere in Greenbrier County.

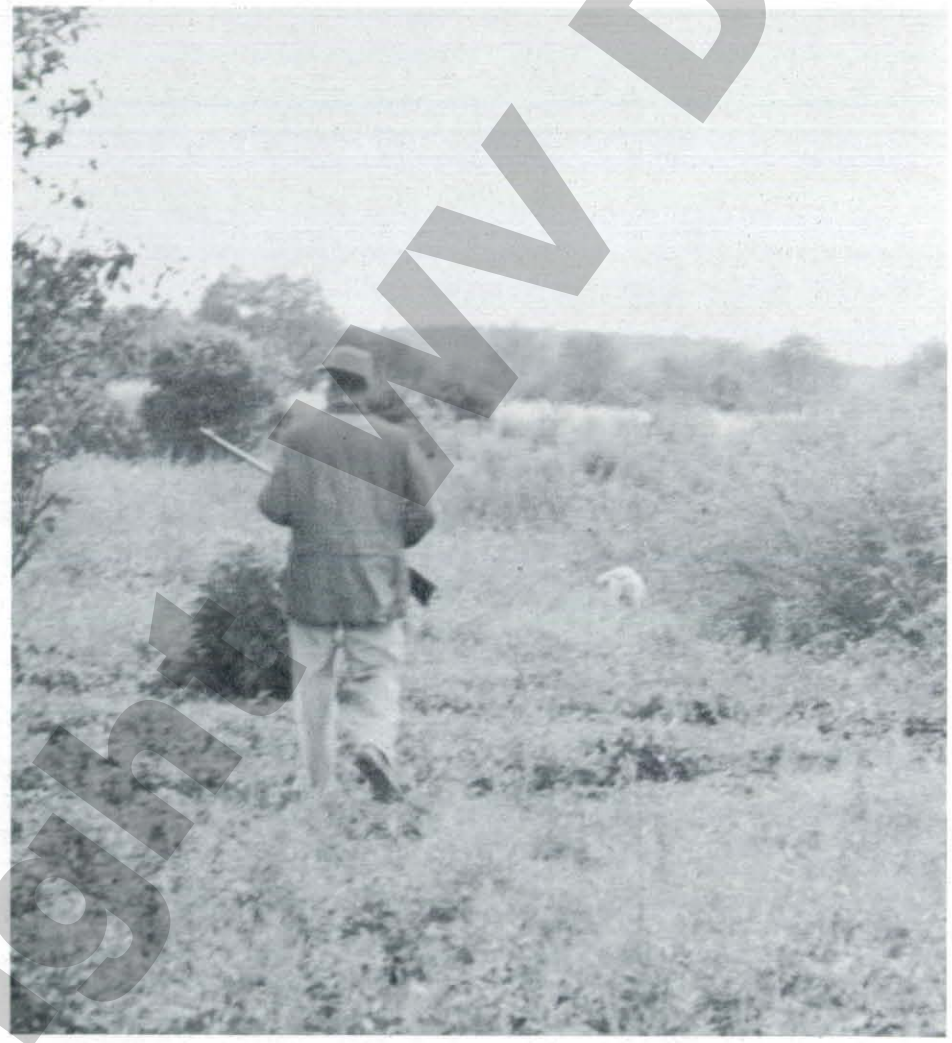
COPY DNR

NOW WHO SAYS SPRING IS NOT HERE. Jill Hopewell, two-year-old daughter of Mr. and Mrs. Phil Hopewell of Charleston.

Copyright WV DNR

HUNTING IN THE 1970s

JOHN MADSON and Ed KOZICKY



THE HUNTING OUTLOOK for the 1970s is bright in spite of the crepe-hanging of some forecasters. There will be some lean times, there always have been, but there are good days ahead for the hunters willing to work at it.

In any decade, hunting depends on two things: abundance of game, and abundance of hunting opportunity. There's no doubt in our minds about the first point. Projecting what we know about wildlife conservation, and certain social and land-use trends, we are strongly optimistic.

In our forests, such game as wild turkey and deer is in good supply and likely to remain so. During the 1970s, a growing part of forest management on both public and private lands will be outdoor recreation of all kinds, and hunting will have a big piece of the action. We predict that deer hunting will continue to be good during this decade. Wild turkey range will continue to expand, and there will be more spring gobbler seasons.

Abundance of such farm game as pheasants, quail and rabbits depends entirely on farm economics and clean-farming. All-out crop production usually means all-in game production. In spite of our rising population, this probably will not occur in the 1970s. Our technology is producing more food on less land, and agricultural experts are recommending that marginal farmlands be shifted to other uses. Best of all, the farm economists feel that land retirement should be on a long-term basis rather than year-to-year. This would have a huge effect on all farm game—and give long-range game management programs a chance to pay dividends.

The 1960's was a decade of strong ups and downs for waterfowl, but generally ended on a high note. Waterfowl will continue to fluctuate in the 1970's, but we predict harvestable surpluses of ducks and geese for many years to come. There is growing support for wetlands conservation and the multimillion-dollar Federal wetlands program and other efforts should begin to tell. The rising tide of citizen interest is having increased effect.

DOVE POPULATIONS ARE GOOD, and fit in with suburban patterns of land use. We predict wide increases in dove hunting, and enough birds to meet the demand.

There'll be plenty of game to hunt during the 1970s, but chances to hunt will depend on the hunter. He must make those chances himself, rather than wait for them to come along or depend on a state game agency to provide them. He should be prepared to hunt some game species less and other species more, and be willing to change his customs as the times demand.

All hunting will have a higher price tag during the 1970s. Most landowners will come to regard fish, wildlife and outdoor recreation as cash crops.

We can expect a steady increase of good shooting preserves in heavily populated regions. This is a healthy trend that increases competition and quality, and can give the hunter more and better shooting at reasonable cost.

All species of game will be more closely regulated by game management units and zones. We can expect to see more species of predators classed as game animals.

The general public will demand high ethical standards of hunters during this decade, and if the hunter cannot keep his house in order, lawmakers may try to do it for him. The greatest single threat to the sport of hunting in the 1970s will not be lack of game, but the slob hunter who is so offensive to the public, the landowner, and to the ethical sportsman.

Everything considered, we are entering the 1970s with good supplies of all major wildlife species. Our conservation programs are working.

Best of all, the sportsman isn't facing his problems alone. At long last, the man on the street is becoming conscious of his environment and is beginning to realize what hunters and fishermen have known for years: that the best parts of our world are the easiest to lose.

COPYRIGHT WV DNR

ARNOUT HYDE JR.

Popular trout pond. French Creek Game Farm in Upshur County.

INSECTIVOROUS PLANTS

EARL L. CORE

AMONG the most fascinating plants of West Virginia are the insectivorous or insect-eating plants. They contain chlorophyll and can manufacture their own food in sunlight, but they supplement their diet by "eating" insects which they capture in various ways.

Actually, the plants do not really "eat" the insects in the same sense that birds or other animals do. The trapped insects are digested by enzymes secreted by the plant. End products of digestion are then absorbed and used by the plant cells for metabolism and growth.

As to how important the insect diet is to the plants, no one is absolutely certain. Apparently the plants can get along very well without an insect diet.

Perhaps, like human beings, they do better on a balanced diet; the insects add nitrogenous compounds, useful in formation of protein. Since insectivorous plants usually live in habitats deficient in nitrogen, this may be a way of supplying the deficiencies.

Regardless of that, these plants are among the wonders of the plant world. Because they are normally found in remote sphagnum bogs and swamps, an aura of mystery seems to surround them.

THE COMMONEST insectivorous plant in West Virginia is the tiny round-leaved sundew, *Drosera rotundifolia,* which may be found growing in sphagnum moss at Cranberry Glades in Pocahontas County or many other boggy places in our mountains. When the sun shines on the leaves they look as though they are covered with sparkling dewdrops, hence the common name.

The tiny white flowers of sundew bloom in August on a stalk about eight inches high.

Sundew's little round leaves, the size of a dime, are thickly studded with redish tentacles, each exuding drops of a glutinous liquid by means of which tiny insects are captured. Within minutes after they are caught, the tentacles bend inward and downward, pinning the insect against the leaf surface in a sticky web.

A digestive enzyme is then secreted and this causes decomposition of the soft parts of the insect. Soluble nitrogenous compounds released by digestion are then absorbed into the leaf. An experimenter will discover the sundew will "eat" a piece of roast beef in the same manner.

THE PITCHER PLANT, *Sarracenia purpurea,* is another and much larger insectivorous plant in West Virginia. It gets its name from the leaves which are hollow and tubular, resembling small pitchers about six inches tall. Its red-purple flowers are produced on stalks a foot high, and bloom in May and June. The lip of the pitcher is dark red in color, like the flowers, and is even provided with nectar glands.

Insects attracted by the color and the nectar work their way downward over stiff hairs, eventually reaching the steepest part of the throat, a polished area without hairs. All six legs of the insect fly out from under him on this slippery zone and he lands in a liquid below. The liquid is composed of digestive enzymes mixed with rain water.

Bacteria may also be active in the liquid and add to rapid decomposition of the insect bodies.

Pitcher plants apparently are not native to West Virginia, although found in the neighboring states of Ohio, Pennsylvania, Maryland and Virginia. Plants from a bog in Somerset County, Pennsylvania were introduced in 1946 into a bog on Backbone Mountain, Tucker County, and into Cranberry Glades. In both places they became well established. Later, in 1962 and 1963, they were introduced into similar habitats near Terra Alta, Preston County, and Mt. Storm, Mineral County.

Today, it would be hard to tell that they are not native plants.

NEED A SPEAKER?

Need a meeting speaker? If you do, your problem is solved. The Speakers Bureau of the West Virginia Department of Agriculture (WVDA) has talks ready on over fifty (50) different subjects.

Topics listed in a new folder, range from animal health to spring wildflowers. The approximate time needed for each presentation and a general description of material covered is also given in the publication.

There are program subjects which will be of interest to almost every group. The new effort is designed to meet the needs of civic clubs, teachers, youth groups, farmers, businessmen and professionals who need speakers.

Most of the talks will have slides or other visual matter. Usually speakers will have printed matter for the audience.

For the teacher or group leader who wants to handle a program at their own pace, some talks are designed to be given by local speakers. These presentations will usually have a speaker narrative and audience information.

To further aid groups in program development, the WVDA makes slides and printed material available for local use. Talks on special subjects related to consumer affairs and agriculture, which are not listed, will also be developed on request.

A request for Speakers Bureau information should be directed to the Information Division, West Virginia Department of Agriculture, State Capitol, Charleston, West Virginia 25305.

The cottontail's habit of coming back to his home territory is often his undoing. The wise hunter will wait until the spooked bunny circles the area and returns.

COPYRIGHT WVDNR

Ira S. Latimer Jr.

West Virginia Streams

COULD BE MODEL FOR NATION

No citizen could reasonably argue that a stream—creek or river—is not the heart of a community, county or state. Yet for generations people have made our streams the convenient depository for trash and sewage.

We are coming to a big STOP on this desecration of our waterways, forcefully and voluntarily. I have asked our Law Enforcement Division to intensify its efforts in litter prevention. Of course, though, any successful program of litter prevention or clean-up will have to be done voluntarily by citizens who care.

During 1969, your Department of Natural Resources initiated a statewide stream clean-up in cooperation with counties throughout the state. Response from counties, civic clubs and a variety of other agencies has been good.

Major objectives of the statewide beautification project are: collect litter along specified streams; locate hulks and dumps for removal; conduct a survey of sewage and solid waste disposal; and distribute literature concerning scenic river clean-up.

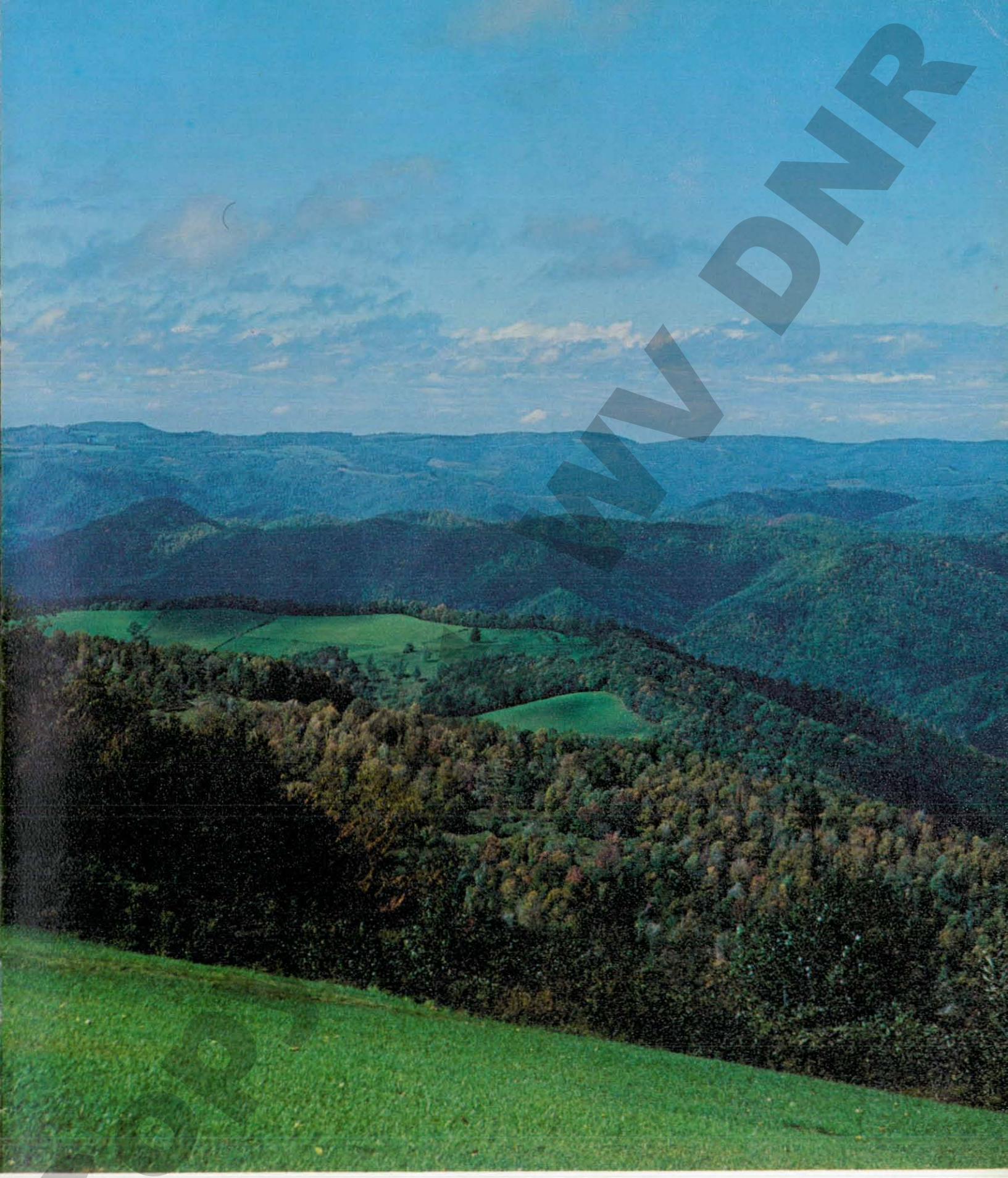
With the national wave of genuine fear and concern about environmental pollution—air, water, and land—West Virginia's clean-up program offers an opportunity to participate in a simple and fundamental way. It can be done, has been done: Elk River, Guyan River, and Pigeon Creek in Mercer County.

I invite every citizen of West Virginia to roll up his sleeves and help clean the stream banks, right in your own community. You'll get the same satisfaction as though you are cleaning your own front yard—for that is exactly what you will be doing.

Please help.

IRA S. LATIMER JR.

Copyright WV DNR



ARNOUT HYDE JR.

Mountaineerland. Enchanting vista as seen from Centennial Roadside Park along Rt. 219 in Tucker County.

WV DNR

Old covered bridge over Mud River in Cabell County near Milton.

ARNOUT HYDE JR.

From: The Department of Natural Resources, Charleston, West Virginia 25305
Return Requested

COVER