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THE GARRETT COUNTY HISTORICAL SOCIETY

*The Garrett County
Historical Society Salutes
100 Years of
Fighting
Forest Fires
in Maryland*

by William Offutt Johnson

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The Garrett County Historical Society Salutes 100 Years of Fighting Forest Fires in Maryland

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With valuable contributions from the Maryland Forest Service, Will Williams, Education Specialist, Retired and Monte Mitchell, State Forest Fire Supervisor. Technical Assistance provided by Francis "Champ" Zumbrun and Joan Johnson

This is the third part of "A Salute to 100 Years of Forestry and State Parks in Maryland." Part 1, "Conserving Forests," appeared in the June 2006 *Glades Star* and Part 2, the "Evolution of State Parks" was published in the September 2006 issue. Part 3, "Fighting Forests Fires," completes the State Forest and Park Centennial Series.

These centennial histories on forestry and state parks in Maryland are dedicated to all the men and women of Western Maryland's State Forests and Parks District 1 (aka the Western Region) who, for more than 100 years, have gone beyond the call fighting wild fires, improving park lands and reforesting the mountains and valleys to provide wood, water, wildlife, cleaner air, scenic views, natural and historic heritage preservation, and recreation to Marylanders and our out-of-state guests. We hope these articles do justice describing the natural resource legacy that has been established.

Fire, when controlled, is one of our most valuable phenomenas, but just let it get away from us, and it will reek and pour down economic loss, destruction and death. Regardless of the location—city, suburb or countryside—the ravages of fire out of control render damages beyond calculation.

Fire causes more damage than meets the eye ...

The following was printed in "The Forests of Maryland" in 1916 written by Maryland's first State Forester Fred W. Besley.

"There has also been a large amount

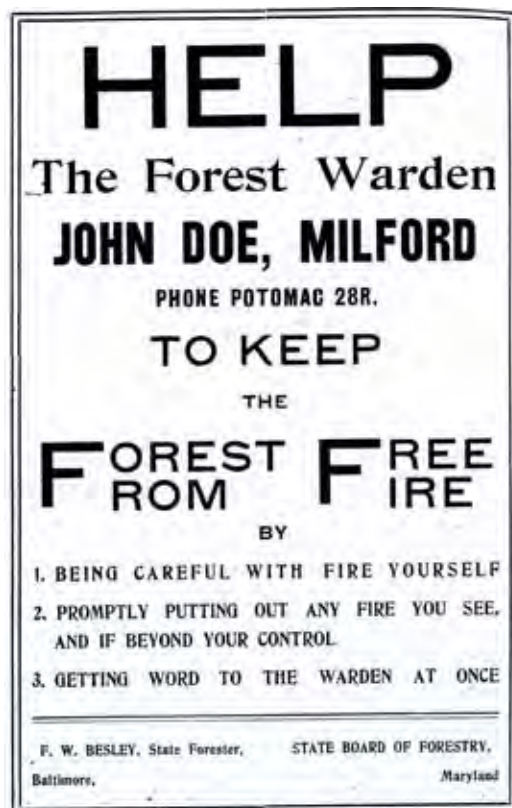


Fig. 2

of unnecessary waste in the removal of timber. Not only has an immense quantity of young growth been unnecessarily destroyed, due to careless methods, but a study of the subject has shown that about half of the usable part of the tree is either left in the woods or wasted in sawing. Not only is there a large amount of unnecessary waste, which improved methods would find it profitable to use, but this large amount of debris left in the woods adds immeasurably to the fire risk. Records show that forest fires almost invariably follow lumbering operations.

"Fires: The forest fire damage in Mary-

land from 1911 to 1915 is as follows:

Year	Amount of Damage (in 1916 dollars)
1911	\$225,801
1912	48,212
1913	42,443
1914	129,844
1915	108,966

State Forester Besley continued, "The damage caused by forest fires is not fully appreciated. This is one reason why so many are allowed to occur, and that many which do occur are given little attention by property owners. Not only do fires damage fences and merchantable timber, whose value is more clearly recognized, but fires also destroy on the ground the seed which nature has provided for the perpetuation of the forest. The accumulated leaf litter and partly decomposed organic matter, so important in conserving soil moisture and adding fertility to the soil, are completely destroyed, the

ground becoming dry and hard. The small seedlings are consumed, and where the fire is not intense enough to quickly destroy the young growth, the bark is burned through on one side, exposing the living wood to decay. The tree may continue to grow, but the decay also increases, stunting its growth and reducing its timber value to a great extent, frequently to the point of making it practically worthless. It is these fire-scars on the young trees and also on older ones which produce the decay ultimately resulting in hollowed trees and many other defects.

"A woodland that is repeatedly burned over by fires constantly deteriorates in

quality, and the production is greatly reduced or ceases entirely. Fire protection is the first requisite for improved conditions in woodlots; without it there can be no permanent improvement. Since, however, 90% of the forest fires are the result of carelessness, the situation will improve as rapidly as people are educated to the nature and extent of the damage caused by forest fires." Fred Besley truly believed in the basic principle that "conservation begins with education."

MARYLAND COLONISTS AND THEIR SUCCESSORS, CLEAR WHAT THEY THOUGHT WERE INEXHAUSTIBLE FORESTS...

For more than 270 years following the establishment of Lord Baltimore's Maryland colony, there was no organized method to perpetuate and sustain forests. The great pre-colonial forests covering 95% of the State declined from clearing, timbering and burning to make space for settlements and agriculture. Further, people paid little or no attention to fires started by natural causes that burned for weeks and sometimes months out of control. By the early 1900s the forests of this state and the soil they grow in had become seriously depleted. A similar condition was found in many states east of the Mississippi River where it was estimated that only 30% forest cover remained in 1907 in the eastern United States.

ABUSE AND DESTRUCTIVE HABITS HAD TO GIVE WAY TO SCIENTIFIC FORESTRY CONSERVATION PRACTICES.

Such were the conditions in 1906 confronting State Forester Fred Besley. The results of his State Inventory published in 1916 revealed the potential forest lands in Maryland covered 2,228,046 acres of woodland, representing 35% of Maryland's original forested lands. However, because of numerous fires, over cutting and no effort to re-plant trees and protect forest lands from more fires, livestock grazing, insect infestation, and/or disease had made much of this potential woodland unproductive and unmarketable. This crisis dovetailed at a time when development in Maryland demanded lumber and forest byproducts be imported from other states and countries to meet the need of growth and urbanization.

This phenomenal forest famine got the



Fig. 3

attention of an incredible coalition of forest and park conservation advocates to take action to re-grow the forests of Maryland. The goal was to renew forest lands into an ongoing sustainable contributor of wood, wood byproducts, water, wildlife and recreation. Woodlands of beauty, green buffers to urban growth, and purifiers of air for the growing Maryland population.

Parts 1 and 2 of the Centennial series detailed how brothers John and Robert Garrett gave land in Garrett County for the first state forest, providing a bill creating a state forest and park department pass in the Maryland General Assembly. These articles further account how State Senator McCulloch Brown of Garrett County wrote and introduced the forestry and state park bill and how Senate President Colonel Joseph B. Seth of Talbot County enthusiastically supported Senator Brown's bill; and how the first U.S. Chief Forester, Gifford Pinchot, gave Senator Brown wording for his forestry legislation and later recommended, to Governor Edwin Warfield, one of his top foresters, Fred Besley, to be Maryland's first State Forester. Also noted was the influence of



Fig. 4.

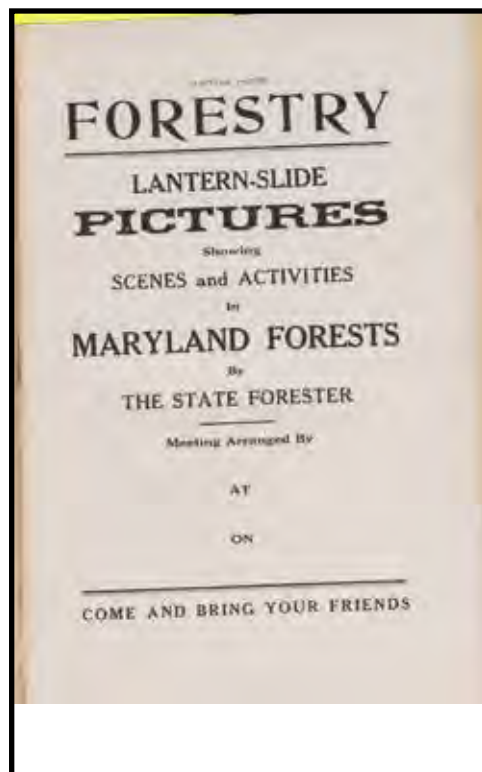


Fig. 5.

the prominent State Geologist, William Bullock Clark, who had promoted forestry programs in Maryland prior to the 1906 legislation. Following shortly afterwards was the good efforts of State Senator Carville D. Benson and the Baltimore Municipal Arts Society and the Frederick Law Olmstead Architects, sons of the New York City's Central Park famous planner, who recommended suburban state parks buffering Baltimore City.

Their actions were most timely and dramatic and coupled with the indefatigable Fred Besley leading his staff of three and with a starting budget of only \$2,000 annually, Maryland began to practice the art and science of managed forestry and providing state parks. Right from the beginning Mr. Besley recognized that if he was to make any improvements in the forests of Maryland, control of forest fires had to be one of the highest priorities in his campaign. Other top initiatives included a county by county inventory of all forest lands of 5 acres or more, establishing a state forest tree nursery, improving the state owned demonstration forests at Patapsco Park, Swallow Falls and Fort Frederick Forest Reserves, and building a staff and rallying volunteer forest wardens. Also he wanted to build advocate support through the Maryland Forestry Association, which he planned to create. He also had an interest in getting people out into state parks in order to educate them on his reforestation programs as previously noted. Believing, "conservation begins with education," changing Marylanders' attitudes and habits pertaining to fire and the traditional uses of woodlands, was the only way his forest management concepts would work. The public had to understand and support Besley in this new conservation discipline. With public awareness, he could reduce the number of fires to fight and get more trees growing, for "many hands make the job easy."

The Maryland Forestry and State Park enabling legislation authorized the creation of the "State Board of Forestry" which operated from 1906 to 1923. Governor Albert C. Ritchie's streamlining of state government in 1923 transferred the State Board of Forestry to the University of



Fig. 6. First logo of the Maryland State Board of Forestry was used in early publications.

Maryland where it remained until 1941, when the Department of Forests and Parks was established and placed under the State Board of Natural Resources.

Under the three agencies mentioned above, between 1906 and 1970 a dynamic foundation was laid for forestry and state park programs, and the evolution of Maryland's forest fire control programs were carried out as follows:

MARYLAND'S FIRST FOREST WARDENS...

Because of Mr. Besley's meager budget, \$2,000 annually, he needed dedicated vol-

unteers to fight fires and carry his message to the public. His continuous horse and buggy travels around the state to prepare a comprehensive forest inventory (the first such study produced by any state in the U.S.) put him in contact with prominent local community leaders who were impressed with him and interested in advancing his program for the good of the State. It was these men to whom Besley appealed to their civic duty and recommended their names to the Governor to be commissioned as Forest Wardens.

When the Forestry Act was amended in 1910, it gave wardens the powers of constables so far as arresting and prosecuting persons for all violations of any of the forest laws or of the laws, rules, or regulations enacted or to be enacted for the protection of the State forestry reservations. Soon 300 such dedicated and upstanding citizens were appointed as Forest Wardens statewide. Most of their work was volunteer; however, Maryland's first Forestry Act provided the Forest Wardens a small compensation of \$20 per year for services rendered and expenses incurred during the execution of their duties. In addition, each Forest Warden received \$1.50 for five hours or less of actual firefighting time and 25 cents per hour thereafter for each hour fire fighting time beyond five hours. They were also involved in educat-



Fig. 7. 1916—Forest Wardens' Conference—Garrett County Courthouse. Straight across, left to right: Clyde Carlton Sines, Fred W. Besley, George W. Tichinel, W.A. Reams, Wm. H. Barnard, Michael Tasker, Abraham Lincoln Sines, Peter F. Michael, J. Harrison Sines, Alexander Bittinger, Mavy T. Mellott, F.F. Myers, William A. Michael, and John T. O'Brien. Note: A.L. Sines is holding a "back fire torch" and he is wearing a cow skin coat made from a cow he butchered.



Fig 8. Forest Warden reinactor and author Offutt Johnson. Photo by Lynn Johnson.

ing the public, including school children, on how to prevent forest fires. And, they talked to friends and neighbors to make them aware of all of Fred Besley's forestry programs and to encourage support of forestry efforts.

But in regard to fire, the Forestry

of ten dollars."

Local wardens were encouraged to draft their volunteers in advance of the fire season to have a Registered Crew they could count on when a fire occurred. A 1943 Forest Warden Manual notes, "It should be remembered, however, that men

Act instituted duties of the Warden that remain today. When a Warden learns of a fire he shall immediately go to the fire and employ such persons and means in his judgment expedient and necessary to extinguish the fire. The Act also authorized Forest Wardens "to summon male inhabitants of the county between the ages of 18 and 50 years to assist in extinguishing fires, and may also require the use of horses and other property needed for such purpose. Any person so summoned who is physically able who refuses or neglects to assist, or to allow the use of horses, wagons, or other material required, shall be liable to pay a penalty

picked up at random by a Warden may very well be of doubtful value on a forest fire." Skilled men who were no strangers to hard work or had previous fire experience were preferred. "A man with such experience, or with a stake in the outcome, is worth ten indifferent greenhorns."

THE "FIGHTIN'EST TOOL"...

The meager state budgets in the early years provided Forest Wardens only a brass badge which had a stamped number and stated "Maryland Forest Warden" around the engraved cross botany logo that is crossed with an oak leaf and pine bough. This handsome symbol has been the Maryland Forest Service and Park Service logo since 1928, showing a strong and proud agency culture for more than 83 years of its 105 year history. Prior to 1928 a silver colored star badge with a stamped number became the first badge. The star was encompassed with a circle stating "Maryland Forest Warden." This badge was issued to all commissioned wardens and only four of these "Star Badges" are known to exist today.

But that's not all they got! The state budget also provided each Forest Warden with his own collapsible canvas bucket. Lightweight, sort of a dull orange/brown color with a comfortable wooden hand grip. Perfect for dumping 1½ gallons of water on a blazing forest fire burning out of control. When collapsed, this bucket was easily tied to their horses' saddle and it was so trim when collapsed it would not

snag on tree limbs as they raced on horseback through the woods to the fire.

Early Forest Wardens had to supply the rest of their tools and equipment. State Forester Besley advised the wardens, "The best tools with which to fight fire are the rake, hoe, shovel, axe and the collapsible bucket." Besley further noted that the warden's best assets were experience,



Fig. 9. Edmund George Prince, Forest Patrolman in Patapsco State Forest Reserve, 1919 until 1930.



Fig. 10. Forest Patrolman Edman Twig from Town Creek with canvas bucket under left arm.



Fig. 11. "Have your tools ready in your machine. . . . Keep car headed out, and when the call comes, make time. May 14, 1928.

good health, and resourcefulness.

Pine branches and wet grain sacks were also discovered to be effective firefighting implements. One Cecil County Warden's report notes that a moonshine bucket used with a wooden pole with a swab of wet rags attached to one end was well known in the region as an effective extinguisher. The pole and the swab of wet rags had been perfected by the moonshine industry and field tested when that industry's fires set the woodlands ablaze. Quick extinguishing of the fire in this way often saved that industry's product as well as equipment.

When budgets improved in the early 1920s, the "Rich fire rake" and the knapsack "Indian" pump were issued to all the wardens. Fashioned from a sickle-bar's triangular mower teeth, the triangular teeth were riveted to a piece of angle iron and attached to a four and one half foot wooden handle. The "Rich fire rake" proved to be the warden's most effective "fightin'est tool" that is still used to this day. The knapsack pump was forerunner of today's bladder bag or backpack pump. The "Rich fire rake," ax and shovel were used to dig a 2- to 4-foot fire line or fire break down to mineral soil that flanked the path of the fire. This line of soil removed the fuel from the path of a ground fire, causing it to burn out when it reached the non-combustible dirt fire line. Fire lines through brush need to be wider than those lines through open timber. Lines on the uphill side of a fire should be wider than those fire lines on the downhill side. Also, the fire crew needs to be mindful of wind velocity. The general rule of thumb is "the stronger the wind, the wider the line.

"Backfire" was another method of

stopping a ground forest fire. Providing the wind was gentle or blowing toward the approaching fire, a backfire could be lit using a drip torch fueled with kerosene. The Forest Warden

would go out some distance ahead of the approaching fire and using his kerosene torch, he would light a new fire that would burn back toward and into the larger fire. When the backfire met the large fire, they would both burn out since all the fuel had been burned out of the fire's path. Only experienced wardens would apply the backfire method. If the wind changed, the backfire could backfire on the warden and he could end up with a much bigger and more violent fire than he started with. During forest warden training, backfire was cautiously described as an excellent way to burn over 100 acres in order to stop a ten-acre fire. Extreme caution had to be used in applying the backfire procedure.

FOREST WARDEN BADGE HISTORY

The silver colored star badge was the first Maryland Forest Warden's badge. The 1906 enabling legislation provided that the

State Forester may apply to the governor to commission forest wardens of the state to enforce the forest laws and carry out all the purposes of the Forestry Act. Wardens were appointed for two-year terms. They would possess and exercise the authority and power of constables of common law under State statutes, so far as arresting and prosecuting violations of laws, rules and regulations for the protection of State forestry reservations. And further for protection of fish and game within the forest reserves. The Maryland Forest Laws were amended in 1910 to expand the police powers of forest wardens, and this law over the years has been occasionally amended to strengthen and expand the authority of both forest and park wardens.

Therefore, it is assumed that since the commissioning of Forest Wardens was part of the Forestry Enabling Act of 1906, the striking of the first silver colored Star Forest Wardens Badge occurred as early as 1906 or 1907. The 1908-1909 Annual Report shows that 60 forest wardens had been commissioned and were beginning to have an impact on fire suppression. As shown in the 1910-1926 listing of forest wardens at the end of this history, their numbers increased considerably. A significant number of Silver Star wardens' badges were produced between 1906 and 1928; perhaps as many as 700 were in use. Today we know of only four Silver Star badges that have survived that 105-year period.

In 1908, two wardens had been employed "at small salaries" to look after the Swallow Falls State Forest Reserve and the



Fig. 12. Often fire wardens and their crew walked to fires in their neighborhoods carrying tools, backfire torches, pole axes, Rich rakes, shovels and backpack water pumps.



Fig. 13. Forest Wardens in Garrett County at their annual meeting and picnic at New Germany State Forest Recreation Area, July 1940. Left to right: George Browning, Abraham Lincoln Sines, Silas Sines, Mike Tasker, Mavy Mellott, George Wilt, E.M. McClintock, J.P. McWilliams, Ernest Durst, Unknown, T.M. Burrell, H.C. Buckingham—District Forester, Donald L. Chisholm, Elbert Michaels, Urner Wigfield, Arthur Broadwater, Matthew E. Martin—Savage River Forest Superintendent, C.W. Grove, Carl Lohr—Potomac State Forest Superintendent and Wade Broadwater.

Patapsco Park and State Forest Reserve. These two “historic first rangers” were called “Resident Wardens,” and their fame is long remembered. At Swallow Falls was the notable Abraham Lincoln Sines who “would rather be right than President.” A.L. Sines told the Governor of Maryland, “Politics does not fight fires! I never ask a man his religion or politics. When it comes to fighting fire in the forest, it takes good strong men of all faiths and all political persuasion to get the job done.”

At Patapsco Park and Forest Reserve was the very uniform conscience Edmund George Prince who was well-mounted on his horse, also called “Prince.” Edmund Prince has become an exemplary model representing the high standards of the Ranger Corps in Maryland State Parks. Both A.L. Sines and Edmund Prince have left their memorable traits and the passion with which they cared for both the land they protected and the people who visited

their forest and park reserves.

The brass shield was the second Maryland Forest Warden’s badge which was issued in 1928. This new badge is in the design of a shield with “Maryland Forest Warden” raised on banners around a handsomely designed circle enclosing the ancient “Crossland” Coat of Arms from Lord Baltimore’s mother’s family. That is the same red and white cross that is on the Maryland flag. The cross on the brass badge is embossed with a white pine bough crossed by a white oak leaf from the Maryland state tree. The shield is reminiscent of the shield carried by medieval knights for protection and identification. So the Forest Warden’s role is similarly involved in the business of protection and he is identified by his symbolic “Shield,” or badge.

It is a guess, but further speculation suggests that the use of the shield shape for the badge may be inspired by the wording on the Maryland State Seal which

proclaims, “I will encompass you with my shield.” Again, offering some form of “protection.” In this thought, the symbolism is vested with the Maryland Department of Forestry’s Forest Warden who is identified by this shield/badge to protect and enhance the people’s forest and parklands from fire and abuse.

In 1943 a stylish charcoal gray uniform with belted Norfolk jacket and jodhpur pants and a light gray campaign hat was issued to full-time State forestry staff. This first official uniform made for a most formal and professional presentation when the brass shield/badge was pinned on the left front of the jacket.

MARYLAND’S FIRE TOWERS...

Of the 34 fire towers reported in use in 1943, it is assumed the Civilian Conservation Corps (CCC) constructed most of these towers in the 1930s, a time when the CCC began many conservation and outdoor recreation projects that remain and are enjoyed to this day. The very first recorded fire tower in Maryland was constructed in Garrett County in 1915, and resembled a kid’s tree fort made of wood and mounted on poles. It was on top of Snaggy Mountain overlooking the “Garrett Gift,” Maryland’s first State Forest Reserve. In order to check on the alertness of the Snaggy Mountain tower lookout, District Forest Warden Abraham Lincoln Sines (nicknamed “Link”) would carry a large bucket of oily rags out to various locations in the Garrett Forest Reserve and set them



Fig. 14. Forest Warden badges.



Fig. 15. Maryland Department of Forests and Parks. Welcome Fire Tower, Charles County near Doncaster State Forest. Photo by Earl Mentzer, September 26, 1961.



Fig. 16. One of the first fire towers in Maryland. Made of wood and located on "Pitch Pine Rock," on Snaggy Mountain overlooking the Garrett State Forest and Herrington Manor State Park. Photo by Fred Besley, August 1920.

burning inside the bucket. Then he would rush back to his office to see if the lookout in the tower would report the fire and accurately plot the correct location of the smoke from the burning bucket of rags. If the lookout failed to call in or incorrectly reported the fire's location, Link would take that lookout "to the woodshed" for some additional and unforgettable on-the-job training!

The Aermotor Company of Broken Arrow, Oklahoma, built nearly all of Maryland's steel fire towers, including those remaining today. All of Maryland's towers and most of those used in the southeast U.S. were 80 to 110 feet tall and featured a 7x7 foot cab. The fire tower kits were shipped from Chicago and when Aermotor first started selling them in 1916, they cost between \$400 and \$800. The Aermotor Company, founded in 1888, is best known throughout the Midwest and western U.S. as a manufacturer of windmills and oil derricks (all these steel tower structures are nearly identical), and they sell them to this day. The Aermotor Company was bought by a group of Texans in 1986 and relocated to San Angelo, Texas.

Tower operators or "lookouts" were

local women and men who lived in the area, who provided a watchful eye during times of high fire danger for a salary of \$100 a month. In some cases men and women with minor handicaps were hired and did outstanding jobs as lookouts. It was seasonal work, for the fire seasons in Maryland start in spring after snowmelt and continue until the deciduous trees leaf out. Fire season returns in fall when the leaves fall and continues until snowfall. This above general rule can change if a very dry and windy summer keeps the moisture in the air low, or should winter be dry, warm, and windy with little precipitation.

The tower lookouts became the "early warning system" of the Department of Forests and Parks in the days before

urbanization expanded into rural Maryland. Their effectiveness, coupled with well-trained and equipped "smokechasers," helped to drastically reduce both the number and the size of forest fires.

You would think fire lookouts would have experienced lots of long, lonely workdays by themselves at 100 or more feet in the sky, perched atop a remote mountain, in a 7 foot by 7 foot cab. But, such was not

BUILDING FIRES
 — ON —
State Forest
 Without Written Permission
PROHIBITED
 Maryland Department of Forestry

Fig. 17.



Fig. 18. Carrie Toms, secretary at the Gambrill State Park/High Knob Forest and Park Office, plotting location of a forest fire by pulling the push pins on fishing line along the compass readings reported from three fire towers.



Fig. 19. Mrs. Vernice Davies sweeps the woods with binoculars from Cub Hill Tower, notes suspected fire in tower log book.

the case. People were attracted to fire towers and curious about what the lookouts' work involved. They got so many visitors up in the towers that they were required to keep visitor logs.

The lookouts were friendly, and cheerfully welcomed visitors for it was a change for them in the routine. Lookouts could have a pleasant conversation and still keep a

watchful eye for smoke. If smoke was spotted, the lookout would bring the conversation around to explaining the steps taken to report it and dispatch a "smokechaser." All official phone or radio calls to or from the tower had to be logged in a Strathmore composition notebook. Some of the towers had a "Forest Fire Danger Weather Station" located on the ground near the base of the tower. Readings were taken 2 or 3 times each day on wind speed, rainfall, temperature, wind direction, and fuel moisture in the air. If the air was humid containing a large percentage of water or water vapor, that was a low fire day. However, if the air was dry and hot—watch out—for fires will start easily and spread—well actually "spread like a wild fire." These weather readings had to be called in to the District Foresters office and also relayed to the State Forester's office in Annapolis via the fire tower's two-way radio network. All the weather reports ended up at Long Hill Tower in Anne Arundel County where Kitty Shortall, "the voice of Long Hill," phoned them into the Annapolis State Forest and Park Headquarters.

There were housekeeping duties of dusting, washing windows, cleaning binocular lenses, and putting up and taking down the U.S. and Maryland flags. If another tower in your county spotted smoke, that lookout would radio or phone you for consultation on the location and the type of fire that might be producing the smoke. You might need to determine whether or not a farmer is liming his field, as the fine powdered lime looks much like smoke, or is there a logging operation in that area or could it be a steam locomotive puffing out that smoke. It may be someone burning trash that called in earlier putting the tower on notice that they planned to burn trash and yard waste between certain hours that day. On the other hand, it may be that a hunter carelessly tossed a cigarette or a camper left a campfire unattended and it started a fire. Perhaps, it was Columbus Day and kids out of school were playing with matches. It could even be a piece of glass from a broken soft drink bottle in the dry grass magnified by the sun's light and spontaneously set the fire on a very dry, windy day and bingo, that little spark is now growing into a raging inferno.

So the two lookouts quickly play detective and eliminate the possibilities before reporting and dispatching the closest "smokechaser" to investigate. Then there is an exercise in plotting the exact location of the smoke that could involve two or more towers participating in a team effort. This process also involved the District Warden's office where there was a large map in a frame that held the map but left space between the back of the map and wall. The map was a large scale and showed the entire area the District Warden was charged to cover. Each tower was marked and all roads, towns and communities were marked as well as volunteer fire companies.

Around the tower locations on the map was a clear plastic circle with the 360 degrees of the compass marked in black. In the center of the compass was a map push pin with a long pointed pin. The push pin was attached to fishing line that passed through a hole in the center of the compass and on through the map. The other end of the fishing line was tied to a piece of metal weighing about 20 ounces. Now to the process of determining the exact location of the fire.

Two, maybe three, tower lookouts

now have spotted a suspicious smoke. Each tower is equipped with an “Alidade” or “Fire finder.” The Alidade is a tall, round, glass-topped table in the middle of the tower cab. Its top surface is higher than the bottom window sills. Under the glass top is a map positioned and oriented to the north/south/east/west as you look out the tower windows. On top of the glass top is a pivoting sighting rod with sites sticking up on each end. Also around the circumference of the circular map is marked the 360 degrees of the compass. Like the map, the points of the compass are also oriented to the north/south/east/west.

Each lookout spins his sighting rod so he can line up the rod on the map with the smoke. Then he reads the compass azimuth and reports the direction of the smoke in the number of degrees from his tower. The District Warden pulls the push pin of each tower reporting and sticks the pin in the map beyond the approximate location of the fire. After stretching the fishing line in the direction of the smoke, as indicated by each tower’s compass reading, there will be a point on the map where all three fishing lines will cross each other. Under the crossed fishing lines is a point on the map where the forest fire is growing. The smokechaser closest to that point is called to investigate, and if necessary, extinguish the fire.

There are some (pardon the pun) tall tales—what we mean to say is “great stories”—about working as a fire tower lookout. For example, take the predicament of Vivian Roberts who worked the 110 foot Town Hill Tower in Green Ridge State Forest in Allegany County. She had spent a long but delightful late fall day in the tower. She didn’t think much about the drop in temperature when she flipped on the small electric heater in the cab in the middle of the afternoon. Then came a little shower for about 30 minutes. “Great! That will help lower the fire danger,” she thought.

About 5 pm she got the ok to “sign off”



Fig. 20.

and close the tower for the day. Her happiness to be going home was curtailed when she opened the trap door in the floor of the cab to discover her 110 steps to the ground were covered with a thin coating of ice. First she cautiously lowered herself through the trap door. Holding tight to a leg of the Alidade she put her shoe on the first step and could feel it slipping. She quickly pulled herself back inside the tower cab. In her own words Ms. Roberts recalls, “Here I was a hundred feet in the air and no way down.” Well, Vivian was determined to get home. She loved work-

ing the tower but she was not about to spend the night up there even if the steps were iced up. “My Lord I was scared,” Vivian exclaimed. “I tried to think of how to get down. That is when I decided to take off my shoes and hope my socks would not slip on the ice.” She went on, “Going slowly and holding both railings white knuckle tight, I finally made it down to the ground. At that point, I couldn’t feel anything in my toes and my knees knocked the whole way home.”

The 150 tower steps or occasional thunderstorms didn’t faze Cub Hill tower operator Mrs. Mohan. In a 1947 *Baltimore Sun* article, Mrs. Mohan reported her biggest worry was the curious pilots from nearby



Fig. 21. Early forest fire tools: pointed long-handled shovel, collapsible canvas bucket, hand-pump sprayer, pole axe, backfire torch, brush hook, single handle cross cut saw, 5-gallon back pack water pump, Rich fire rake. Photo by Fred W. Besley, May 1928.



Fig. 22. (Left to right) Bill Parr, Joe Kaylor, Henry C. Buckingham, and A.R. "Pete" Bond. In the years following Besley's retirement in 1942, Kaylor, Buckingham, and Bond each took a turn running the state's forestry program. Bill Parr headed up State Parks.

airfields. "Many of the boys from one of the county airfields fly around the tower, looking at me working." She explained, "I don't mind that, but one day they might misjudge their distance and hit the tower."

As Maryland became more populated and urbanized, and communication systems such as "911" came into being, fire towers became obsolete in many of the once-rural areas they protected. Many were dismantled in the 1950s and 1960s, although a few remain available for use throughout the state. Most of the remaining fire towers now serve as part of the DNR radio communication network with radio antennae attached to the tower.

It is of interest to note that six towers were relocated and rededicated to conservation interpretation and outdoor educational use. The lower half of the Hollofield Tower at Patapsco Valley State Park was moved by the Maryland National Capital Park and Planning Commission to the "Critical Area Driving Tour" between Patuxent

River Park and Merkle State Wildlife Sanctuary. Half of the Brandywine Tower from Southern Prince George's County was moved to the Fairview Outdoor Education Center in Washington County. The Shiloh Tower in Dorchester County was acquired by Queen Anne's County Department of Parks and Recreation, who erected the lower one half of it at their Terrapin Beach Park just north of the Chesapeake Bay Bridge on the Eastern Shore in Queen Anne's County.

The Quantico Tower in Wicomico County was moved complete with cab about five miles to Hebron where it now stands as an exhibit at the privately owned Chesapeake Fire Museum. Three quarters of the Great Mills Tower from St. Mary's County was relocated to the Lathrop E. Smith Environmental Education Center near Rockville in Montgomery County in the Upper Rock Creek Regional Park by the Maryland National Capital Park and Planning Commission (M-NCPPC), and the Montgomery County

Board of Education. This tower was dedicated to the memory of Stan Ernst, an outdoor education pioneer and former Director of Parks in the M-NCPPC.

Four towers have open observation decks for scenic viewing and nature study and two are complete with cabs.

The Thayerville Tower on Meadow Mountain was relocated with its cab intact and reassembled farther west atop Meadow Mountain in Deep Creek Lake State Park. It has a commanding view of the lake and is used to interpret Maryland's forest fire control history. Visitors climb 110 feet to the cab to view scenic Garrett County and discover what a busy and exciting workday the forest fire lookout experienced. For a new outlook on your world, you don't want to miss a summer time visit to the Thayerville Tower. It will take you to a new level and heighten your appreciation of fire lookouts and smoke chasers.

THE SMOKECHASERS...

Forestry work progresses slowly. Some trees grow at a rate of approximately one



Fig. 23. In 1947, State Forester Joseph F. Kaylor accepted a position with the Federal Government in Washington, D.C. He left the state for about one year and then returned to Maryland to become the Director of Forests and Parks. While Kaylor was in Washington, Henry C. Buckingham became acting State Forester. At that time, Maryland underwent a severe drought and forest fires burned unmercifully state-wide. These fires played big in the press. Bill Parr was the Western Maryland District Forester.



Fig. 24. 1943 World War II Forest Fire Prevention newspaper ad featuring Hirohito, Adolph Hitler, and Mussolini, who take pleasure when campers let their campfires get away to burn wood and forest products needed for US Defense Industries.

foot annually. Sounds slow, but trees grow faster than changing years of public abusive practices and attitudes bent on destruction for short-term gains over establishing long-term sustainability. In step with the ever-growing population in 1935, Mr. Besley swelled the forest warden ranks to 650 men.

As the network of Forest Wardens and fire towers increased across Maryland, so did the need to have more people “on the ground” to assist wardens in their firefighting duties. In the late 1920s, the position of Forest Guard, or “Smokechaser,” was developed. After a tower operator spotted a “smoke,” a Smokechaser living near the smoke would be dispatched to investigate, and if necessary, put the fire out.

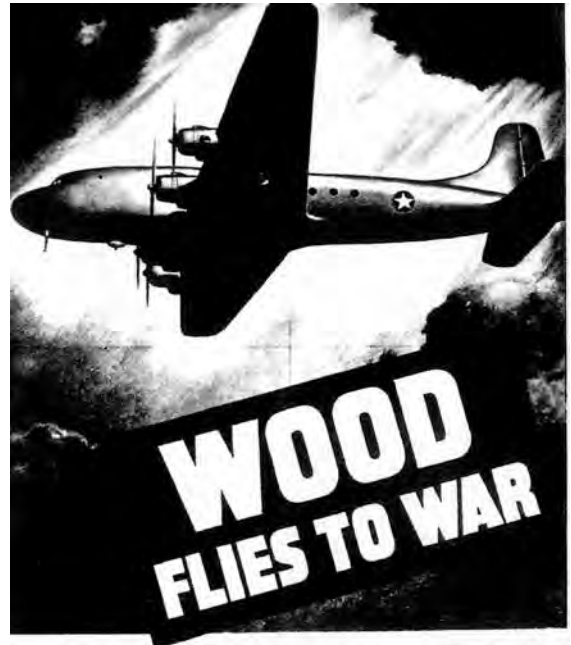
In a 1928 letter to prospective Smokechasers, Assistant State Forester John Curry wrote: “Whenever smoke is sighted from the tower, you should leave immediately for the fire. Do not wait until the smoke develops and do not wait until a call has been made to the Forest Warden—go immediately... It is necessary for you to get away quickly. Have your tools ready in your machine. Fill your spray tank in advance. Have your backfire torch ready for action. Keep your car headed toward the way out, and when the call comes, make time.”

Smokechasers had to be resourceful as well. In the absence of fire towers, a tall

tree served as a capable lookout. In his recollection of smoke chasing in the 1930s, Smokechaser Herman Toms of Frederick County noted a typical day: “I worked mostly in Washington County, Red Hill section Southeast of Keedysville climbing a tree for a lookout with a crank type telephone nailed to a tree in a box with a lock on it. I usually climbed that tree about every 30 minutes or so and staying in the tree for long periods of time when the fire danger was high.”



Fig. 26. Forestry Supervisor Paul H. Seward, standing left, and one of his Forest Rangers, standing right, pose with a class of Harford County High School Seniors who have completed the World War II Civil Defense Forest Fire Fighting Course. In addition to course certificates, these young people received a Civil Defense Forest Fire Fighters Badge, arm band, and the manual of the Forest Fire Fighters Service, Office of Civilian Defense.



THE ARMY & NAVY NEED 20,000 SQUARE FEET OF PLYWOOD FOR EACH CARGO PLANE

Fig. 25.

ADDING TO AND CONTINUING FRED BESLEY'S LEGACY WHILE MEETING THE CHALLENGES OF THE 1940s, 1950s AND 1960s...

When Fred Besley retired in 1941, he recommended that the Maryland Department of Forestry's name be changed to the “Maryland Department of State Forests and Parks” since the Civilian Conservation Corps had provided an increase in both new State Forest Recreation Areas and a few State Park sites as well. Also, the mandate to provide state parks, he pointed



Fig. 27. Insignia of the Forest Fighters Service, Office of Civilian Defense.

out, was spelled out in the original 1906 enabling legislation.

Mr. Besley truly believed in and was an advocate for providing the public with Outdoor Recreation. However, since he was such a dedicated forester, he preferred to see the recreation facilities provided as adjuncts to his State Forests.

But, various donations of significant land and historic sites to his Department of Forestry that were not connected to a State Forest could not be passed up and had been handsomely restored by his own supervised CCC programs. Then, let's face it, the "Department of State Forests and Parks" is the most appropriate name to describe what we do. It was a rarity in state conservation agency names. Perhaps only two other states chose that title. But, in Maryland, it had its economies and its efficiencies and proved a workable combination for 30 years. With an expanded mission, there was a need to organize a more detailed division of the work needing to be done statewide.

Mr. Besley's replacement was Joseph F. Kaylor, a 1927 Penn State / Mont Alto Forestry School graduate, who served as State Forester until the new position was approved as "Director of State Forests and Parks. Joe Kaylor was more than a forester for he had a glowing personality and he was a "people person" with keen political skills. He believed in local people being involved in conservation issues locally and so he pushed to establish "Forest Conservancy Districts" across the state run by local boards of appointed citizens. These County Forestry Boards still function today. Another goal was the preservation of forested stream and river valleys across the state, and many of these stream and river valleys

became in time major state parks such as Patapsco, Gunpowder, Seneca, Tuckahoe, Deer Creek and Pocomoke. Joe Kaylor also had a passion for increasing the number of and advancing state parks; and he worked hard at doing that. When Mr. Kaylor became Director of State Forests and Parks, H.C. Buckingham was appointed State Forester. Since Henry Buckingham was a protege of Fred Besley, he would carry on the well-established forestry programs now going on their thirty-fifth successful year

while Joe Kaylor concentrated on advancing State Parks. This plan provided the opportunity to expand the Department's organizational structure as follows:

Director of Forests and Parks: The top person in the Annapolis Headquarters was the Director of Forests and Parks, Joseph F. Kaylor, whose staff consisted of a State Forester and a Superintendent of State Parks.

State Parks Administration/organization: The Superintendent of State Parks



Fig. 28. Forest Ranger Patrol Truck with "utility body" now provides ample storage for today's advanced fire fighting equipment.



Fig. 29. A 1943 training meeting at Black Camp on Deer Creek shows a mapping class in progress. Also of interest is one of the nine 1½ ton fire trucks with 275 gallon water tanks that the Dept. of Forests and Parks acquired in the early 1940s. A black Chevrolet coupe with siren and red flashing light is also shown. These coupes were assigned to the Forestry Supervisors.

Forest fire control meeting at Herrington Manor Forest Recreation Area in 1955



Fig. 30. Practice safe loading and unloading the fire plow from the tilt bed truck.



Fig. 33. Practice with ropes and knots.



Fig. 31. This station will teach new strategy for fire line crews.



Fig. 32. "Potbelly stove coffee" in Herrington Manor's shop.



Fig. 34. Portable pump practice using water from Herrington Manor Lake.



Fig. 35. Left. Teams discuss their strategy for the next exercise on estimating the size of a forest fire and the amount of acreage burned.

Fig. 36. Above left. Becoming familiar with Civil Defense equipment.

Fig. 37. Above. Practicing with a fire jeep on a simulated fire exercise.





Fig. 38. Formal classroom seminar in fire behavior.

(for a short term William R. Hall succeeded by William A. Parr), had one assistant, and together they worked through each District Forester and his Assistant District Park Supervisor down to each individual Park Superintendent. A "District" was a geographical region of the State each covering from four to eight counties as follows:

District I, Western MD (Garrett, Allegany, Washington and Frederick Counties);

District II, Southern MD (Montgomery, Howard, Prince George's, Anne Arundel, Calvert, Charles and St. Mary's);

District III, Northern MD (Carroll, Baltimore, Baltimore City, Harford and Cecil);

District IV, Eastern Shore (Kent, Queen Anne's, Talbot, Caroline, Dorchester, Wicomico, Somerset and Worcester.)

Forestry Administration / Organization: The State Forester had five Assistant State Foresters as follows who coordinated efforts within the same four Districts as listed under State Parks:

Asst. State Forester for "State Properties" coordinated Forest Management on State Forests with each Forest Superintendent through the District Forester and his Asst. for State Forest Management;

Asst. State Forester for "Private Cooperation" coordinated with each District Forester and his assistants for assisting private woodland owners;

Asst. State Forester for "Assisting Wood Using Industries" coordinated with each District Forester in assisting the wood-using industries of the State;

The State Roadside Tree Supervisor who supervised the administration of the State Roadside Tree Laws and the Licensing of private Tree Trimming Experts; and

Asst. State Forester for Fire Control, Insect and Disease Control who coordinated with each District Forester and his Forestry Supervisor on Forest Fire Control and the prevention and eradication of problem tree insects and diseases.

A Public Education & Information Staff was available to assist all the above programs.

FORESTRY SUPERVISORS...

Now, this is a good place to return to our main subject of fighting forest fires in the 1940s, '50s and '60s and we pick the process up with the Forestry Supervisors who directed the Fire Control operation locally.

For the purposes of this article, we will focus on the work of the Forestry Supervisors in District I, Western Maryland, to demonstrate the variety and scope of this position. In Western Maryland there were originally three Forestry Supervisors up until the late 1960s when it was determined, due to advances in equipment and the training of Rangers, that one Supervisor could cover the District.

Forestry Supervisor Elmer Upole covered Garrett County with a staff of five Rangers. Forestry Supervisor Brook Bodkin covered all of Allegany County and western Washington County with a staff of three Rangers, and Forestry Supervisor Herman Toms covered eastern Washington County and all of Frederick County with a staff of three Rangers. All of these Supervisors and Rangers were backed up by the cooperating assistance of both full-time and Volunteer Fire Companies and also the State Park Rangers who were issued Forest Fire Patrol Trucks and Jeeps. Flexibility was one of the economies of combining State Forests and Parks in one agency. Much of the work was similar and personnel and equipment



Fig. 39. Training exercise in fire fighting.



Fig. 40. 1957. Herrington Manor Forest Recreation Area. Jeeps, ¾ ton patrol trucks, tilt bed, and low boy transporter are lined up for inspection during training meeting.

could be easily deployed to emergencies in either State Forests, State Parks or on private land. Fire was not the only need for extra staff; there were special events in the parks, dedications, festivals and fairs, where forestry staff would lend a helping hand. Then when it came time to pick seed cones for the State Tree Nursery, the Park Rangers pitched in to assist Forest Rangers climb trees and pick pine and spruce cones. Variety made the work interesting.

With the fall fire season usually running three and one-half months and the spring fire season usually running three months depending on snowfall amounts, you may wonder what the Forestry Supervisor and his Rangers did for the remaining five and one-half months covering mid winter and mid summer. The following outline demonstrates the non fire season work:

Fire Tower Maintenance—All the towers needed painting and occasional repairs and servicing on a rotating schedule that was best accomplished in the summer months.

Telephone Line Maintenance—Because the early Wardens' homes, State Forest and State Park offices and the fire towers were often in remote locations not yet serviced by the telephone company, the Forestry Supervisor's staff had to construct and maintain its own telephone line in some counties. This was the case in Garrett and eastern Allegany and portions of Frederick County. This required the Forestry Supervisor as well as Rangers to be telephone linemen as well as firefighters.

One severe Garrett County winter, Chesapeake and Potomac's (C&P Telephone) trans-continental land lines were totally out of commission due to a blizzard and ice on the poles and lines in addition to many fallen trees on the lines. C&P Telephone did not have two-way radio equipped trucks and cars at that time.

Maryland Forest and Park Rangers did have the two-way radios and as a result of the communication emergency, they were asked to assist the C&P crews in reconnecting Maryland with the rest of the country. One veteran of the freezing winter repair job said, "It was like working in an ice box in a war zone. The weather was unforgiving and the ever present snapping and cracking of tree trunks under the weight of the ice sounded like incoming rifle and cannon shots I heard during World War II." The repair work took several months and the State Forest and Park Rangers remained on the job coordinating communications between the C&P crews. In return for the helping hand, C&P Telephone donated a large supply of telephone and line equipment to the State Forest and Park telephone network.

Forest Fire Prevention Work—The Forestry Supervisor and his Rangers joined in with the highly successful national

public service advertising campaign of "Smokey Bear" to educate and help the public be more aware of their responsibility to be careful with fire in all situations whether camping, picnicking, fishing or hunting or perhaps burning trash or just driving in the country. The fire prevention program got under way prior to Smokey coming on the scene in the mid 1940s. Forest fire awareness started to expand during World War II as a part of the Civil Defense Program and also as a war effort to protect our supply of wood and wood byproducts for the defense industries. Wood was in high demand for defense as just about everything needed wood from paneling air craft interiors to creating jeeps, bombs and guns. Paper was needed for books and manuals and railroad ties for transportation of war materials and mine props for coal mines so that locomotives and power plants and naval ships could be fueled. It all related to defense.



Fig. 41. Maryland Forest Patrol Truck at Buckingham State Forest Tree Nursery at Harmans, MD, 1953. Pictured from left to right: Arthur (Art) Mintz, Forest Ranger, Aubry Bladen, Conservation Aide, Henry Schloser, Forestry Supervisor (Southern MD), Dwight Brannan, Roadside Tree Supervisor, and H.C. Buckingham, State Forester.



Fig. 42. Forest Fire Patrol truck with utility body.

The Civil Defense concerns were to keep fires from destroying forests and also lighting up our coast lines or major population centers. An enemy couldn't shoot or bomb you if they couldn't see you, so don't set anything on fire including the woods. Blackouts at night were something everyone learned to live with.

Two newspaper and magazine ads (seen on page 11) from the early 1940s grabs the public's attention to preventing Forest Fires as an important part of the World War II war effort.

The Forest Supervisors and Rangers organized fire prevention campaigns during the non-fire season months. In winter they did fire prevention programs in schools. In summer they provided elaborate exhibits at the County and State Fairs and at special events and festivals. The Smokey Bear posters were put up at eye-catching spots, special feature articles were put in local newspapers and spot announcements were provided for the local radio stations. Every big fire usually got front page newspaper coverage with estimated damage costs highlighted and if arson was involved, the perpetrator would be identified.

Some of the County Fair Forest Fire Displays were quite elaborate. Forestry Supervisor Brook Bodkin, at the Allegany County Fair, became well known for his intricate and naturally unique exhibits which looked like a Christmas Tree garden of Maryland's great outdoors. Complete

with real flowing streams and a lake with real water, and miniatures of boaters and fisherman, Brook had an electric train carrying logs steaming by a tranquil State Park at the base of the mountain where miniatures of a Boy Scout troop were planting tree seedlings. Farther up the mountainside a forest fire was glowing, an effect Brook accomplished with lights and a heat fan beneath a piece of screening fitted into the surface of his papier mache mountain, while tiny deer and other woodland creatures were fleeing the flames. A nearby dirt road was providing access to a miniature forest fire patrol truck and a

miniature fire jeep followed by clouds of dust to imply speed, racing to the fire. Atop the mountain was the silver Fire Tower keeping watch for other fires. His creative exhibits covered the full range of modern forest management including reforestation, growing forests, harvesting, protecting the tree crop from fire, wildlife and water conservation and outdoor recreation. It was one of the County Fair's highlights that attracted many visitors who always left with a smile and a White Pine Tree Seedling to take home to plant.

Senior High School and College Students Trained as Forest Fire Crews—Because of the shortage of young men to fight fire during World War II, Forestry Supervisors and Rangers organized Registered Fire Crews of college students and high school seniors. School students were most happy to volunteer for Forest Fire Civil Defense Duty since it was an unquestionable allowable excuse from school for both training and fire call as well.

Civil Defense Programs after World War II—In the early to mid 1950s, a new Civil Defense Program was implemented to deal with potential "Cold War" threats. In addition to combating fires that might be set by some long range missile, Forestry Supervisors and Rangers were now trained to measure radioactive fallout. Additional training covered the Forest Fire Control staff's role in coordinating and assisting other Civil Defense personnel with emergency management. This new responsibility brought many new manuals and added new tools to the already well equipped State



Fig. 43. The Maryland version of the "Almost Go Anywhere" Fire Jeep is being driven by Forestry Supervisor Herman D. Toms of Frederick County.



Fig. 44. Forestry Supervisor Herman Toms with one of his rangers as they prepare for a day of aerial reconnaissance.

Forest Patrol trucks and cars. As the 1960s progressed, the equipment for each Forest Patrol truck became so voluminous that the standard 8 or 9 foot open bed was replaced with "Utility Bodies" like those used by plumbers with numerous cabinets and compartments. This "Utility Body" still provided an open bed area where the 260 gallon water tank and a self-winding hose reel could be carried along with fire rakes, shovels and backpack pumps.

Training Meetings—Recalling Fred Besley's basic principle, "Conservation begins with education," what was then good for the general public was even better for the Forestry Supervisors and their Rangers. So, training was conducted in the months between fire seasons. Weeklong sessions were held for Civil Defense Training, Public Speaking and Public Relations skills including how to get your message across with exhibits and talks. Also, the District Foresters and the Asst. District Foresters as well as staff from the Annapolis Headquarters took part in these Training Meetings. Forest fire fighting methods are constantly being improved and new equipment is being introduced annually. The annual training helps staff at all levels stay current on advanced techniques and procedures. With more and more opportunities to utilize computers and Global Positioning Systems in conservation work, the technology is becoming essential and staff at all levels must strive to stay up with these new space-age tools.

The classes were often presented by U.S. Forest Service Staff and the U.S. Civil Defense Agency. Or, perhaps a course was purchased by the Department from an independent provider. Class room type courses were presented in hotel conference centers or at times at military facilities or

centers run by the University of Maryland.

The practical type training, where in-the-field equipment was demonstrated and practiced as part of the training, or Fire Camps were set up and an exercise was run, or rescue skills were taught and practiced, then these week long training meetings were usually held in the State Forest Recreation Areas with cabins such as those at Herrington Manor and New Germany. This training was like the Department of Forests and Parks' own Academy, with lots of tradition, initiations, great meals, awards presented, class photos and take-home handmade mementos inscribed with the date, location and name of the training meeting. These training meetings were team-building exercises as much as they were educational sessions.

Maintaining Fire Roads and Small Water Reservoirs—If a Forestry Supervisor's assigned counties contained a large State Forest or a large State Park with considerable public land, then the fire roads, truck trails and small water impoundments were maintained by Rangers in the non-fire season months so that these dirt roads and trails would be open for travel during fire season. Same way for the small reservoirs that supplied water for the Rangers' trucks, Jeeps and backpack pumps in remote locations.

Collecting Seed Cones for the State Forest Tree Nursery—In order for the State Forest Tree Nursery to supply the correct tree seedlings native to the appropriate habitats across the State, the Forestry Supervisor would deploy his Rangers and often be assisted by some additional Park Rangers, because time was of the essence, to collect pine and spruce seed cones. Burlap bags of cones were collected from the towering tree tops and shipped to what was eventually named the Buckingham

State Forest Tree Nursery at Harmans near "BWI" Airport. The Buckingham Nursery was sold recently to the State Highway Administration to provide part of the right-of-way for State Route 100. A new state-of-the-art Forest Tree Nursery was developed near Preston in Caroline County on the Eastern Shore. An impressive new subdivision has been developed on a part of the old Harmans Nursery site not needed for Route 100. Those familiar with the old Nursery will recognize tall stately pine and spruce trees that are remnants of original Nursery stock. Incidentally, the new subdivision on the old Nursery site is named "Buckingham." You will recall the Department of Forests and Parks' second State Forester was H.C. Buckingham. Such is the plight of open space preservation in Maryland with its ever present demand for growth and development. Like Fred Besley, H.C. Buckingham made great gains in State Forest and Park lands preservation and contributed handsomely to the reforestation of Maryland. He deserves a State Forest to be named in his honor and not a subdivision, even if it is a nice one.

Law Enforcement Training—The post-war economic boom brought many blessings in peace time jobs, housing and community growth, greater expendable income and mobility with all those fabulous cars from the 1950s and the leisure time to enjoy all the new prosperity. As the 1960s rolled on, a downside came along with the population growth and the revitalized economy. The crime rate fed partly by the illegal drug culture also began to grow spreading from the big cities into the smaller cities and towns and then to the more rural parts of the State. Consequently, drug users came into the State Forests and Park campgrounds, picnic



Fig. 45. The Henryton fire in 1962 was a spectacular one. This picture, taken from a light plane flying over, shows the mixed farm and woodland which was burned over. Also threatened was the state hospital. With dry conditions existing throughout the eastern portion of the United States, extreme caution had to be taken on farmland as well as forested areas to prevent major fire damage.

areas, beaches and marinas as well. The old Forest Warden with Constable police powers, which had been suitable for enforcing the forestry laws, was not adequate to deal with the multiple problems associated with drug-related crimes. The Forest and Park Rangers had to be trained and certified just like State Troopers in order to deal with the increasing crimes of the drug culture. Bringing the Rangers up to Certified Law Enforcement Standards required more training, and the purchase of more specialized police equipment including “police special cars and trucks.” All these new law enforcement requirements put new priorities on staff time and new pressures on the Forests’ and Parks’ annual budget. Rangers now had two full-time jobs:

1. Continue to do all the Fire Control work and Park Management work as in the case of Park Rangers, and

2. Take on the full-time duties including court appearances and training required to be Certified Maryland Law Enforcement Officers.

The Maryland Forest and Park Rangers were up to the challenge and they performed admirably.

THE MECHANICAL AGE...

It was not until the 1940s that the Department of Forests and Parks developed mobile fire fighting units. A fleet of nine 1½ ton trucks, each with 275 gallon water tanks, several hundred feet of hose and hand tools for a 20 person crew, allowed wardens to get to fires quicker and put more water on the blaze. “You’ve got to mechanize today to fight forest fires under modern conditions,” said H.C. Buckingham, Maryland’s third State Forester. “People just won’t work with their hands the way they used to; they demand tools

and equipment.” By 1956, Buckingham’s Forest Service boasted 185 two-way radio sets, 34 lookout towers, 10 tractors with fire plows, 18 portable pumps on light vehicles, and a fleet of 22 specially equipped fire jeeps.

MARYLAND FOREST PATROL TRUCK CHEVROLET, ¾ TON PICKUP

This forest or park ranger vehicle was the day-to-day workhorse of state forestry and park operations from the late 1940s through the 1960s.

1956 FOREST FIRE PATROL TRUCK

The basic ¾ ton pickup with 4-speed transmission was outfitted at Hollofield Automotive Shop in Patapsco State Park with the following equipment:

- Two-way radio—vacuum tube type receiver, transmitter and a transformer occupied 4 feet of a 5 foot tool box.
- A 135 gallon marine plywood water



Fig. 46. District 1 (Western Maryland) State Forest and Park Staff meet at Ali Ghan Country Club, Cumberland, MD, 1960. Left to Right—1st row: Tunis J. Lyon, Robert H. Tritapoe, Donald J. Kendall, R. Thomas Thayer, Marion T. Hoffman, Wilson Warnick, Adna R. Bond, Elmer H. Uphole Sr., Donald H. Boyer, Ralph T. Peace, Herman D. Toms. 2nd row: Harry M. Hartman Jr., Wm. A. (Clint) Irwin, Brook Bodkin, Urner Wigfield, Otto Schultz, William H. Johnson (District Forester), Floyd O. Custer, Clarence Grove, Charles C. Thomas, Ward L. Ashby, Bill Slider, 3rd row: Marshall Moats, Curtis L. Conway, Rease Bowman, Tom Dixon, Harold F. Stark, Bob Warnick, E. Harland Upold Jr., Dick Mills, Charles E. Sandy, Myrl J. Wilt. 4th Row: Paul R. Mateer, Joe Meachem, Dick Bond, Art Merell, Delmar Sanders, George Rexroad, Robert Friend, Rolland G. Schoch.

tank.

- A hose reel with 200 feet of 1 inch, high pressure hose and adjustable nozzle.

- Fan-belt driven Panama Pump. Installed under the hood, it pumped water into and out of the truck's tank with adjustable pressure.

- A 20 foot suction hose was used to fill the 135 gallon water tank from a well, pond, stream or lake.

- Two or more 5 gallon "Indian Pump" backpack tanks each with a hand pump.

- Two 5 foot tool boxes on each side of the water tank were part of the tank assembly and were constructed of marine plywood. The left box contained 12 fire rakes, a pole ax, a long handle pointed blade shovel, and a brush hook. The box on the right side of the water tank held the two-way radio equipment described above.

- Window post mounted, pivoting spot light.

- Hand-held, battery operated, search light.

- Siren and emergency red flashing lights.

- First aid kit, canteen of drinking water and small tool kit.

- AM Radio

- There was 2½ feet of open bed behind the tailgate for a chain saw in a case,

gas can, and extra Indian Pumps.

From 1940 into the 1960s, Forest Warden/Forest Supervisor Paul H. Seward of Harford County was dedicated to improving forest fire fighting tools and methods. He used his mechanical skills and knowledge of pumps and wooden boats to perfect the marine plywood tanks and pumping systems for the patrol trucks. Forest Ranger (ret.) Rolland G. Schoch of Garrett County provided technical assistance on this description of the patrol truck's and Fire Jeep's equipment.

MARYLAND FOREST FIRE JEEP

The Fire Jeep, developed by the Maryland Department of Forests and Parks, was used regularly between 1947 and 2005.

In 1947, using the civilian version of the famous "Willys-Overland"—the World War II cross country, ¼ ton "General Purpose Vehicle" (commonly called the "JEEP")—Forestry Supervisor Paul H. Seward in Harford County developed a plan for creating a Fire Jeep. By adding fire fighting equipment to the go-anywhere Jeep, fire crews could drive off road to hit fires fast in fields and woods, controlling them before they spread into challenging wild fires. Once the fire was contained within a fire line, then patrolling that line would be faster using the Jeep to check hot

spots and places where fire jumped the line.

The Department of Forests and Parks outfitted their Fire Jeeps at the Hollofield Automotive Shop within Patapsco State Park in Howard County. The basic 4 cylinder, 45 horsepower, 4 wheel drive Jeeps were delivered from the dealer to Hollofield where the following fire fighting equipment was installed prior to their assignment throughout the State:

- Two-way radio. The early radios ran on a vacuum tube type receiver and transmitter. This bulky equipment including a transformer rode on the two back fenders under black metal covers (note boxes in photo on page 16).

- A 45 gallon steel water tank with 200 feet of ½ inch high pressure hose was carried on a hose reel mounted on top of the tank.

- Fan-belt driven "John Bean" Water Pump, adjustable up to 600 lbs. pressure, with brush guard mounted on front bumper pumped both into and out of the 45 gallon tank. A 20 foot suction hose was included to fill the tank from a well, pond, stream or lake. The high pressure spray smothered fire quickly.

- Adjustable pistol grip nozzle was attached to the 75 foot hose.

- A 5 gallon "Indian Pump" backpack

water can with hand pump.

- Two fire rakes each with four triangular teeth for digging fire lines down to mineral soil.
- Shovel, short "D" handle type with a pointed blade, and a pole ax.
- Search light, heavy duty and portable.
- Siren and emergency red flashing lights.
- First aid kit, canteen of drinking water, and small tool kit.

FOREST FIRE RECONNAISSANCE BY AIRPLANE...
(SEE FIG. 44, PAGE 17)

During extremely severe fire seasons, arrangements were made with the Civil Air Patrol (CAP) in Frederick County for Forest Supervisor Herman Toms, who was a CAP Pilot, to fly their airplane to search for smokes in areas where fire tower observation was not available.

The 1965 article below from the Maryland Conservationist, is an example of media assistance in creating public awareness for an upcoming forest fire season.

FIRE CONTROL IN MARYLAND
BY LARRY McDANIELS, ESQ.

One of the primary functions of the State of Maryland, Department of Forests and Parks, is the protection of 2,850,000 acres throughout the State from the ravages of fire. Responsibility for this massive undertaking rests with the State Forester for fire control, William H. Johnson, who administers the Department's State-wide program.

In recent years, Maryland has been among the leaders in forest fire prevention and control. On only one occasion in the past decade has more than 2,000 acres burned in any single year. In 1961, a record low of 546 acres (.02 percent of the State's forested land) was lost. The national average that year was ten times as great.

When the State Board of Forestry was created in 1906, there was no organized effort to control the numerous fires which occurred throughout the woodland areas. Many persons, in fact, were convinced that their regular burning off of woods was beneficial. Such fires, they argued, resulted in better grazing lands, improved the blackberry and huckleberry crops and helped eliminate snakes and other pests.

Forest fire prevention and control rested with local Forest Wardens, who did the best they could with the primitive equipment available in those days. In the 1920s, a new fire rake and a "backpack"



Fig. 47. Jesse Morgan from the Maryland Forest Service prepares his radio as he nears a staging area for personnel fighting a wildfire on Little Allegheny Mountain near Corriantville, Maryland.

5-gallon fire pump were introduced, but supplies were limited and the fighting of forest fires continued to be a discouraging, physically exhausting task.

These conditions prevailed in Maryland until 1942, when the current phase of efficient fire fighting originated. The country was at war, and the necessity of rapid forest fire suppression took on new and significant meaning. Federal appropriations were established, which made possible extensive purchases of portable pumps, hand tools, and trucks to speed men and equipment to fire scenes. Two-way radio communication systems were instituted, and modern steel fire towers erected to expedite fire-spotting procedures. The addition of federal funds also enabled the State to employ more qualified personnel for year-round service, plus the training aids necessary for instruction in various fire-fighting techniques.

Forest fire prevention and control is accomplished in three phases—education, preparedness, and suppression.

Education is carried on throughout

the year by the Department's personnel, who contact individuals and groups and enlist their assistance in the elimination of fire hazards and the reduction of fire risks. Fire prevention programs are presented to school children, youth organizations, service clubs, and similar groups. Exhibits soliciting public cooperation are displayed annually at State and County fairs, and other gatherings. Enforcement of laws and regulations dealing with forest fires also is a prevention activity.

Fire preparedness consists of maintaining an organization of Forest Wardens, registered crews and volunteer fire companies equipped to combat forest fires. This involves a constant liaison and continuous training of the suppression forces, as well as the acquisition of modern equipment and the maintenance of all fire-fighting tools.

Fire suppression involves the prompt detection and accurate location of all forest fires and burning operations which might get out of hand and escape to nearby woodlands, the dispatching of adequate suppression forces to fire scenes, the direct-



Fig. 48. Today, regionally assigned, radio dispatched, tilt bed trucks quickly transport fire plow tractors with operator protection bars to wildfire locations throughout the State of Maryland.

ing of the actual fire-fighting operation, the investigation of such blazes to determine the cause and to affix the responsibility, the prosecution, where necessary, and complete reports of all forest fires.

Part of Maryland's excellent record as one of the leaders of forest fire prevention and control can be attributed to legal restrictions. The Forest Conservancy Act of 1943 is an example. Section IV of that law permits open-air burning between the hours of 4:00 P.M. and midnight from March to May and from mid-September to mid-December. This limited burning is permissible only after fire breaks have been cleared and equipment is available to extinguish the blaze. Since the danger of fire spreading is usually less after sundown, burning is confined to evening hours. Also, at this time of day, wind speed is not likely to be as great and humidity is higher.

Maryland is divided into nine units for the purpose of fire control. Each unit has a Supervisor and from one to six Forest

Rangers. There are thirty-four fire towers scattered across the State from Snaggy Mountain in Garrett County to Green Hill, on the Eastern Shore, with the central command post located at the Long Hill Tower in Anne Arundel County.

Smoke sightings by two or more towers can pin-point a fire by triangulation to within a radius of one-half mile or less. When such sightings occur, the information is radioed to Rangers who are constantly on patrol in vehicles equipped with 80-gallon water tanks, high-pressure hoses and other firefighting tools. Fires of major proportions are handled by the combined fire services throughout the State with military units available for emergencies.

Although the Department of Forests and Parks is constantly expanding its campaign for forest fire prevention in every way possible, it has achieved an excellent record over the years. Perhaps the efficiency of its suppression organization is best attested by the reduction in the annual loss

from forest fires, which has been kept well below the national average for seventeen consecutive years.

Despite the outstanding effort made by Forest and Parks personnel in the prevention and control of forest fires over the years, it is still the individual citizen's responsibility to be alert to the ever present danger of such catastrophes. Thankfully, the increased awareness of the average citizen has helped to make fire control in Maryland a reality. All forests need protection from fire: don't YOU be careless. KEEP MARYLAND GREEN.

REMEMBERING THE GOLDEN DAYS—DEPARTMENT OF FORESTS AND PARKS 1941-1969

When you seriously look into the progress and accomplishments of both the forestry and the state park movements in Maryland, you are amazed to discover there are so many dramatic and lasting accomplishments. Today you find truly magnificent natural and historic parks for public enjoyment. Also you find sustainable forests both on public and private land that do provide wood and wood by-products, water conservation, wildlife and outdoor recreation. Then you study the limited financial and human resources that have been made available to provide the State Forest and Park legacy for our benefit, as well as future generations, and you conclude that all that has been accomplished must be some kind of miracle. Yes, it is nothing short of a miracle. It was just 105 years ago that only 5% of Maryland's forests offered merchantable timber for harvest. There were no state parks, wildlife had been depleted, and flooding in towns along the Potomac River Valley and other streams and rivers was an annual event. Landowners gave no thought to reforest-



Fig. 49. State-of-the-art wildfire unit "category 4" engine and tanker with the latest Class A foam delivery system for extinguishing wildfires faster and preventing flairups; and also towing a D-14 tractor with fire plow.

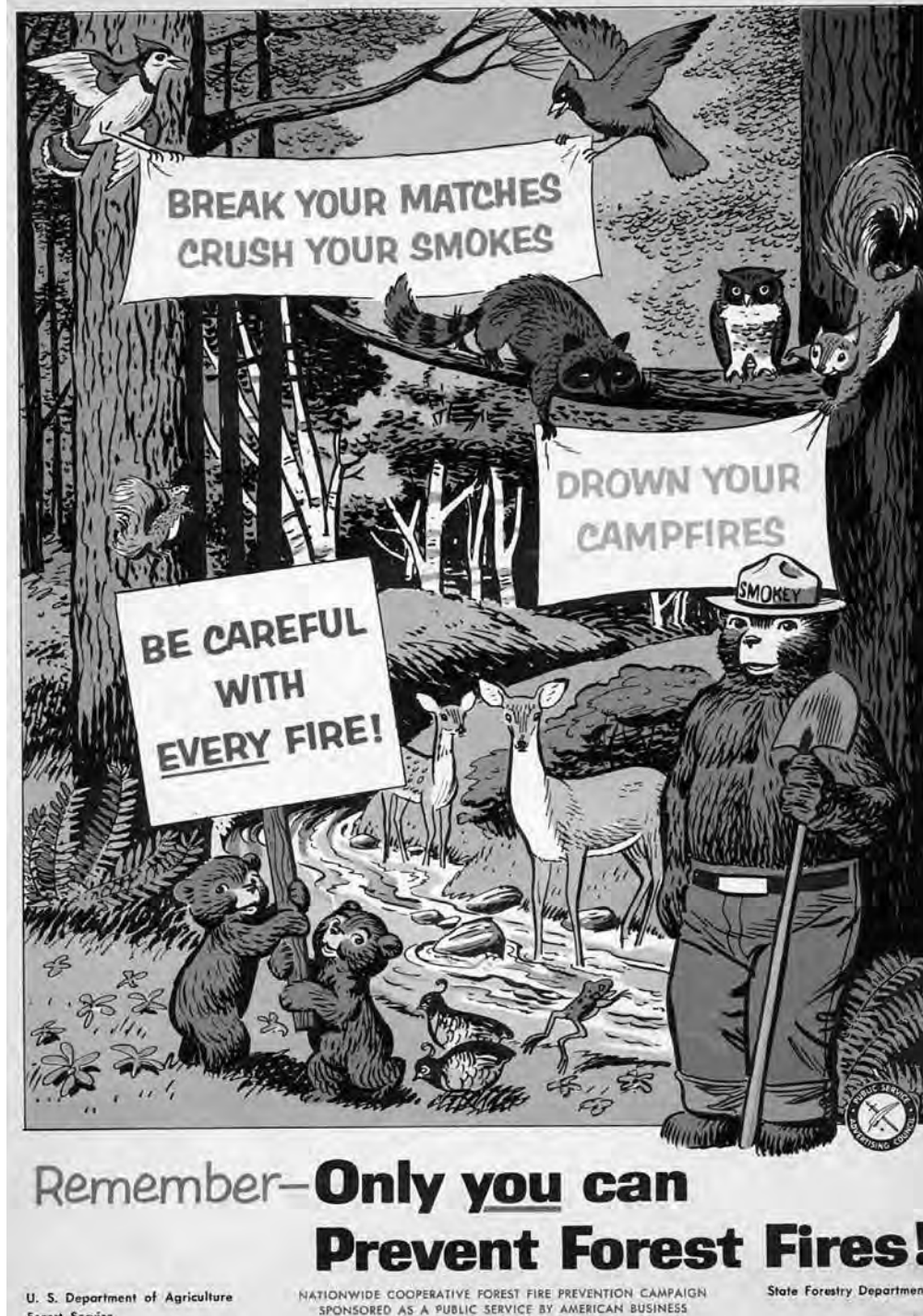


Fig. 50.

ing idle fields and pastures. Finally, there was little or no concern for fire safety and prevention and there was no organized fire control program. Habitually, forests were for depleting and burning. Then they were burned again and again.

We are fortunate that State Forestry and Parks initiatives have been consistently working in Maryland for 105 years to renew forest lands. Every era saw progress

and Maryland often leads the way with successful programs and plans that work and set new standards for the practice of forestry and state park management and protection.

Fred Besley worked tirelessly to get the trees growing and set the professional standards proudly practiced by today's staff. Then came the Department of Forests and Parks in 1941, and in spite of the personnel

drain of the World War II defense effort, more trees began to grow and the fires burned less. This period of almost 30 years of the Department of Forests and Parks was a golden tribute to what Fred Besley started.

It was the continued dedication of what foresters Gifford Pinchott and Fred Besley had inspired that made successful results. The staff was committed to the advancement of the forestry and state park goals in what can only be described as a "labor of love" incised in what many proudly describe as, "It's not work, it's a way of life."

Army Supply Sergeants could take lessons from Maryland's Forest and Park staff. Varied creative maneuvers were developed to overcome budget shortages to bring notable projects to successful completion. Staff gave freely of their personal time to answer the call whether it was a forest fire on Thanksgiving Day, or a severe ice storm on Christmas Day, or a Strategic Air Command bomber crash in the middle of a January blizzard, or a big crowd-drawing Fourth of July special event in a state park. There was a willingness to get the job done. It was unique and very special in an era that insisted on a strict adherence to the 8 hour day, 5 days a week regimentation and the trend of specialization that said: "Can't do it because that's not in my job description."

This Maryland State Forest and Park staff had a "can do" attitude and marched to the beat of getting the fires out and making their park areas look good while serving an ever growing post-war boom in visitors seeking new and exciting outdoor recreation opportunities. In 2010 Maryland State Forests and Parks together served over 13 million outdoor recreation visitors. At the same time, the forestry staff increased forest resources to help feed a growing demand for the building industry

that had an insatiable appetite for lumber from Maryland forests. Today, 41 percent of Maryland is forested, which is amazing given the amount of urban and suburban growth that has occurred statewide.

FIRE MANAGEMENT TODAY

From the 1970s until today, Maryland State Forest Service and Park Service continue to maintain our valuable legacy. Only a few fire towers remain today to remind us of the humble beginnings of what we call today the "Wildfire Protection Program" in Maryland. This proud heritage of protecting our forest from the devastating effects of wildfire is still carried on by the men and women of the DNR Forest Service. Today, as in 1906, careless people start the majority of wildfires in Maryland. The leading causes of wildfire in Maryland are debris burning, arson, and children playing with matches.

Our earliest Forest Wardens would be impressed, although a bit bewildered, at the strides that the fire management program has taken. Fire weather is monitored from remote automated weather stations. That data can be accessed from the Internet and software helps predict expected fire behavior. Fires are reported and dispatched through enhanced 911 communication systems, and fire perimeters are plotted using Global Positioning Satellites.

Great strides have been made in modern well-equipped wildfire engines and trucks with the latest technology such as "Class A Foam" delivery systems to extinguish wildfires faster and prevent flare-ups. Tractor fire plow units on "tilt bed trucks provide an effective initial transport and attack capability and provide the dozer operator with protection within an enclosed cab.

What has also drastically changed is our knowledge and use of fire as a management tool, and the understanding that not all fires are bad. Prescribed fires applied under the proper weather conditions by professional firefighters can have beneficial effects on the environment by creating wildlife habitat, preparing forest harvest areas for replanting, and hazard fuel reduction by reducing fuel loading.

What hasn't changed is the dedication and purpose of the Maryland Dept. of Natural Resources Forest Service and their wildland firefighters, who look back on this rich heritage of Fred Besley and the

early forest wardens and smokechasers as the very heart of the Wildfire Management Program. Today, the agency is equipped with the training and specialized equipment needed to meet the challenges and demands to provide effective wildfire protection services for the citizens and communities of Maryland. These resources are also made available to other states and federal agencies. Highly trained wildland fire crews and single resource experts have traveled across the United States to battle some of the nation's toughest wildfires. Nearly a century later, we think Mr. Besley would be proud! In the words of State Forester Pete Bond, "The history of Maryland's State Forests and Parks is a classic example of people, the highest form of the animal kingdom, working in concert with trees, the highest form of the plant kingdom, to be good stewards of the earth on which we all depend so much."

Recollections from Smokechasers Charles (Charlie) C. Thomas, Forest Ranger and Superintendent/ Manager, Herrington Manor and Swallow Falls State Parks

After returning from the European Theater of World War II, Charlie Thomas was hired as a "Forest Guard" or "Smoke-chaser," which was the forerunner to the term "Forest Ranger" as the position is now called.

He had a busy couple of weeks in this new job and was relaxing late on a Sunday afternoon at home when he got called out for a fire. This fire was on the southeast side of Backbone Mountain near the coal mining community of Vindex.

Forest Supervisor Elmer Upole told Charlie to "pick up Forest Warden George 'Plucky' Wilt in Kitzmiller, which is down on the Potomac River." Plucky would help him round up a crew to fight the fire which the tower reported was growing fast. When Charlie got Plucky in the patrol truck, Charlie said, "Where in the world are we going to find a crew late on a Sunday afternoon to fight this fire! Plucky responded "no problem, go on across the Potomac River into West Virginia where the bars are still open and we will find plenty of willing fire fighters there."

Charlie said, "Old Plucky burst

through the saloon door so fast that he had eight unsuspecting customers deputized to fight fire before they knew what hit them. Most of them were coal miners from Vindex, Maryland, and they were hard workers and determined to get that fire under control, and even happier to get paid to do it." It was a great lesson in crew recruitment for Charlie. Years later when Charlie became Superintendent of Herrington Manor State Park, he had Plucky Wilt on his park crew as manager of the day use area at Herrington Lake. Plucky was committed to trapping and removing a large snapping turtle population from the lake, and he told this writer he had a wonderful recipe for turtle soup. I figured that recipe reinforced Plucky's commitment to reducing the turtles in the lake. Plucky was a woodsman and a Ranger from the old volunteer forest warden days, and he both looked and acted the part – a real genuine character. He had a pair of the 1930 jodhpur britches from the first warden's uniform which he was still wearing daily in the mid-1950s. He claimed, "They wore like iron! Can't wear 'em out! Could poke holes in 'em, but can't wear 'em out!" He also bragged about his fishing worms he dug up at home. "They were as long as your arm!"

Not long after the Sunday fire at Vindex, Charlie Thomas and two volunteer wardens finished up on another Backbone Mountain fire at 2am. It had been a long day. Driving back on Route 135 to Elmer Upole's base of operation in Mountain Lake Park, they saw the glow of a new fire across the B&O tracks near Altamont at the top of the famous seventeen mile grade of the B&O railroad. That mountain-climbing rail line follows the South Fork of Crabtree Creek and the Savage River up from Bloomington. It was a hot fire the wardens saw, energized by its own dry fuel and fanned by wind funneled by the Crabtree Valley. Charlie and crew grabbed fire rakes and backpack water cans which they hand carried down to the fire. As they approached, they were amazed to see a large oak tree and brush around it fully ablaze with the fire which suddenly and terrifyingly exploded. The fire crew instantly dropped those heavy five gallon Indian water cans and with renewed speed and vigor retreated from the blast. The heat was so intense it melted the rubber hoses

right off the five gallon water cans they had abandoned. The crew could feel the heat scorching their backs as they escaped the blast. No one knew what caused the explosion. It could have been methane gas that built up inside the old oak tree which was rotting away inside. It could have been some flammable product the railroad used that was inadvertently set aside and brush got piled on top when the right of way was cleared annually to prevent fires. We can only guess at the cause. However, what we do know is our young fire crew eventually got that fire out.

Upon their return to their Mountain Lake Park base of operation, their equipment-conscious Forestry Supervisor Elmer Upole was more concerned about the loss of hoses on the back pack five gallon water cans than he was about the crew escaping the blast. I would like to think Elmer was playing with the crew to lighten up what

was a serious, life-threatening event. But the story demonstrates the peril and danger forest rangers faced in the routine of their day-to-day work.

Talk about peril in the work place: Consider the routine of painting the exterior of the fire tower cab. Charlie Thomas relates the procedure. "You climb the 110 foot tower with your helper. Once inside the cab, you open the windows and stick a board out two of the windows opposite each other. The oak board is 10 feet long, 8 inches wide and about 2 inches thick and is positioned so that almost 3 feet hang out over the side of the cab to be painted. Now with your helper sitting on the board safely inside the cab, you tie a safety rope snugly around your waist and the other end of the rope is secured to some fixed member of the tower that will easily hold your weight.

"Now you climb up on the board and

at 110 feet in the sky, you slowly and carefully back yourself out the tower window holding with both hands tightly to the board. Your helper, still sitting on the board inside the tower cab, slides you your paint bucket and brush. Holding the board with one hand, you dip your brush and start painting the cab sides and window frames. Now that you have gained confidence in the board, the safety rope and your helper's grasp, it is time to stand up on your lofty perch and paint the tower's roof. Oh, boy! How great it is, this business of protecting trees and wildlife from forest fires. You offer a short prayer that some red tailed hawk doesn't mistake your head of hair for a rabbit or squirrel and come swooping in for a powerful grab of scalp. One thing is for sure, you can't beat the view. And so that's the way it was in the golden days of the Department of Forests and Parks—a great job with a towering view."

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- Fig. 1 Thousand-acre forest fire in back of Beltsville Agriculture Center in Prince George's County, MD. Photograph by F.W. Besley, April 17, 1936. Department of Forestry – William Offutt Johnson Collection.
- Fig. 2 Forest Fire Prevention Poster. Maryland Board of Forestry Annual Report 1920-21.
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- Fig. 6 First Logo of Maryland State Board of Forestry. From Staff Listing, Maryland Board of Forestry Annual Report 1920-21 and *The Forests of Maryland*, 1916.
- Fig. 7 Forest Warden's Conference. Garrett County Courthouse, 1916. Photographer unknown. From Silas Sines, Jr.
- Fig. 8 Forest Warden Reinactor, 1992. Photographer Lynn Johnson. From the William Offutt Johnson Collection, Three Centuries of Rangers.
- Fig. 9 Forest Patrolman Edmund G. Prince, Patapsco Park and State Forest Reserve, 1920. Photographer unknown. From Maryland Board of Forestry, William Offutt Johnson Collection.
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- Fig. 11 Fire Crew Leaving for a Fire, Patapsco Park and State Forest Reserve, Ilchester, MD. May 14, 1928. Photographer unknown. Maryland Board of Forestry, William Offutt Johnson Collection.
- Fig. 12 Forest Warden and Fire Crew Walking to a Fire. Photographer and date unknown. Maryland Board of Forestry, William Offutt Johnson Collection.
- Fig. 13 Annual Forest Wardens Meeting at New Germany, July 1940. Photographer unknown. Maryland Board of Forestry, William Offutt Johnson Collection.
- Fig. 14 Forest Warden Star Badge, 1907, and Forest Warden Brass Shield, 1928. Maryland Board of Forestry, William Offutt Johnson Collection. Color copied for publication by Offutt Johnson.
- Fig. 15 Welcome Fire Tower in Charles County near Doncaster State Forest, September 20, 1961. Maryland Department of Forests and Parks. Photographer Earl Mentzer. William Offutt Johnson Collection.
- Fig. 16 Wooden Fire Tower on Snaggy Mountain, Garrett State Forest, 1920. Photographer Fred W. Besley. Maryland Board of Forestry, William Offutt Johnson Collection.
- Fig. 17 Forest Fire Prevention Poster for State Forest Lands. Maryland Board of Forestry. Publication Date Unknown.
- Fig. 18 Carrie Toms plotting forest fire locations at Gambrill State Park, High Knob Office, August 30, 1962. Department of Forests and Parks. Photographer Earl Mentzer, William Offutt Johnson Collection.
- Fig. 19 "Smoke Gets in their Eyes." Women working fire towers, August 3, 1947. By Geoffrey W. Fielding, *Baltimore Sun*. From Forestry Supervisor Paul H. Seward. William Offutt Johnson Collection.
- Fig. 20 Maryland 1941 Forests and Parks Uniform Shoulder Patch. Color copied for publication by Offutt Johnson. William Offutt Johnson Collection.
- Fig. 21 Early Forest Fire Tools. Maryland Board of Forestry. Photographer Fred W. Besley, May 1928. William Offutt Johnson Collection.
- Fig. 22 Bill Parr, Joe Kaylor, H.C. Buckingham, and Pete Bond, approximately 1949. Photographer M.E. Warren. Courtesy, Maryland State Archives. Besley-Pfeiffer Collection. Maryland Department of Forests and Parks.
- Fig. 23 Cartoon Sketch of Joe Kaylor, H.C. Buckingham, and Bill Parr commenting on severe forest fires in 1947. Drawn by Craig, *Sunday Times-News*, Cumberland, April 13, 1947. William Offutt Johnson Collection.
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- Fig. 25 World War II, "Wood Flies to War" Poster. Published in *The Greatest Good — 100 Years of Forestry in America* by Char Miller and Rebecca Staebler for the Society of American Foresters, 1999.
- Fig. 26 High School Seniors completing Civil Defense Forest Fire Fighting Course, approximately 1943. Photo provided by Forestry Supervisor Paul H. Seward. William Offutt Johnson Collection.

- Fig. 27 Civil Defense—Forest Fire Fighters Service insignia for arm band and badges. Provided by Forestry Supervisor Brook Bodkin. William Offutt Johnson Collection.
- Fig. 28 Forest Ranger Patrol Truck. Photographer unknown. 1995. Department of Natural Resources, Maryland Forest Service.
- Fig. 29 Forest Fire Training Meeting at Black Camp on Deer Creek, Harford County, June 22, 1943. Photographer Karl E. Pfeiffer, Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 30 Unloading fire plow tractor from tilt bed truck. Approximately 1956 at Herrington Manor. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 31 Teaching new strategy for fire line crew. Approximately 1956 at Herrington Manor. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 32 Coffee in Herrington Manor Shop. Approximately 1956. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 33 Practice with ropes and knots. Approximately 1956 at Herrington Manor. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 34 Portable Pump Practice at Herrington Manor Lake. Approximately 1956. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 35 Training teams discuss strategy for estimating acreage burned. Approximately 1956 at Herrington Manor. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 36 Becoming familiar with Civil Defense Equipment at a Forest Fire Training Meeting. Approximately 1956. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 37 Fire Jeep on a simulated fire exercise. Approximately 1956 at Herrington Manor. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 38 Formal Classroom Seminar in Fire Behavior. Approximately 1966. Location and Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 39 Fire Jeep and Fireline Crew Training in Frederick County. Photographer Earl Mentzer. August 30, 1962. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 40 Fire Vehicles lined up for Inspection, Herrington Manor Training Meeting. Photographer Earl Mentzer. June 7, 1962. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 41 Arthur Mintz, Aubry Bladen, Henry Schloser, Dwight Brannan, and H.C. Buckingham with Patrol Truck, at Tree Nursery, Harmans, MD. 1953. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 42 Forest Fire Patrol Truck with utility body. Photographer and location unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 43 Herman Toms driving fire jeep, Frederick County Training Meeting, 1962. Photographer Earl Mentzer. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 44 Herman Toms and Ranger Donald Kendel with Airplane for spotting forest fires, Frederick County, April 30, 1962. Photographer Earl Mentzer. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
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- Fig. 46 District 1 Staff at Ali Ghan Country Club, Cumberland, MD, 1960. Photographer unknown. Maryland Department of Forests and Parks. William Offutt Johnson Collection.
- Fig. 47 Jesse Morgan prepares to fight forest fire near Corriganville, MD, 2010 Photographer John A. Bone, Cumberland *Times-News*. William Offutt Johnson Collection.
- Fig. 48 Maryland Forest Service Tilt Bed Truck with Fire Plow Tractor, 1995. Photographer and location unknown. Department of Natural Resources, Maryland Forest Service.
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Appendix A

Remembering the Staff and Volunteers who Advanced, Protected and Managed Maryland's State Forest and Park Legacy in Garrett, Allegany, Washington and Frederick Counties Professional Foresters Serving as Directors and Administrators

Besley, Fred W.	1st State Forester
Kaylor, Joseph	2nd State Forester, First Director, St. Forests & Parks
Buckingham, Henry C.	District Forester Western MD, 3rd State Forester, Acting Director, State Forests and Parks
Johnson, William H.	District Forester Western MD, Chief Fire Control, and Superintendent of State Parks State-wide
Parr, William A.	District Forester North Eastern MD & Western MD, Superintendent of State Parks, Deputy Director, State Forests and Parks,
Hathaway, David L.	Superintendent of State Parks
Barton, Rick.....	Superintendent of State Parks
Ruzzin, Paul M. (Rusty)	Superintendent of State Parks
Settina, Nita.....	Superintendent of State Parks
Bushman, Chris	Deputy, Superintendent of State Parks
Bond, Adna R. (Pete)	Assistant State Forester and 4th State Forester
MacLauchlan, Donald E.	Assistant Superintendent of State Parks and 4th Director of Forests & Parks
Lyon, Tunis J.....	District Forester, Assistant State Forester, and 5th State Forester
Mallow, James	Assistant District Forester, Chief of interpretation for Park Service, Assistant State Forester, Director, MD Park Service, and 6th State Forester
Riley, John.....	Assistant District Forester, District Forester, 7th State Forester
Koehn, Steven W.....	Chief of Forest Fire Control Statewide, 8th State Forester
Zants, Alan.....	State Fire Supervisor
Mitchell, Monte	State Fire Supervisor
Hartman, Harry	Assistant District Forester
Paulhamus, Jack	Assistant District Forester
Thayer, R. Thomas.....	Assistant District Forester, District Forester
Irwin, William A. (Clint).....	Assistant District Forester, District Forester
Gilmore, George	Assistant District Forester, Regional Forester
Peace, Ralph T.....	Regional Park Supervisor, Assistant Superintendent of State Parks
Brodie, John E.....	Assistant Regional Forester, Regional Forester
Mason, C. Eugene.....	District Park Supervisor
Groves, Warren E.	Forester, Savage River State Forest
Mateer, Paul R.....	Assistant Regional Forester
Zlomek, Bernard	Assistant Regional Forester
Metz, Jr., Ernest L.	Assistant Regional Forester
Willets, Kenneth H.	Assistant Regional Forester
Antill, Ronald G.....	Assistant Regional Forester
Johnson, Ray.....	Assistant Regional Forester, Regional Park Supervisor, Program Open Space Project Officer for Western Maryland
Mechem, Joseph.....	Forester, Savage River State Forest

Professional Landscape Architects Serving as Directors and Administrators

Spencer, P. Ellis.....	2nd Director of State Forests and Parks
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Volunteer Forest Wardens who served in Garrett County at sometime between 1910-1926

Arnold, Silas.....	Dobbin	Bittinger, Harmon.....	Meadow Mountain
Aronhalt, James	Bayard	Bolden, Albert.....	Finzel
Barnard, W.H.....	Walnut Bottom	Bowman, Lewis	Oakland
Barnard, William H.	Bloomington	Bray, B.T.	Swanton
Beachy, E.A.	Grantsville	Broadwater, C.R.....	Bittinger
Biggs, J.W.....	Wilson, West Virginia	Broadwater, Columbus F.	New Germany
Bittinger, Alexander.....	Ottaway	Broadwater, G.W.....	New Germany

Chisholm, Arthur.....	Friendsville	Oester, A.J.....	Bitteringer
Detrick, Mahlon	Friendsville	Reams, W.A.....	Swallow Falls
Durst, Harvey	Bevansville	Robeson, E.O.....	Avilton
Ferguson, W.H.....	Elder Hill	Rounds, Floyd C.....	Merrill
Folk, C.J.....	Keyser's Ridge	Ryman, M.K.....	Jennings
Fresh, David.....	Bitteringer	Savage, Sherman G.....	Sang Run
Friend, J.G.....	Swanton	Sharpless, D.....	Allegany Heights
Friend, S.E.....	Winding Ridge	Sims, James H.....	Allegany Heights
Glotfelty, J.C.....	Rock Lodge	Sims, R.A.....	Sunny Side
Gnagey, G.J.....	Salt Block Mountain	Sines, Abraham Lincoln	Swallow Falls
Green, F.W.....	Bitteringer	Sines, Clyde.....	Swallow Falls
Green, F.W.....	Bitteringer	Sines, Elijah.....	Friendsville
Hartman, John A.....	Accident	Sines, Harrison.....	Sang Run
Harvey, A. Scott.....	Short Run	Sines, William Taylor	Swallow Falls
Harvey, Tilden R.....	Eagle Rock	Sisler, Daniel.....	White Rock
Harvey, Wesley.....	Fairview	Sloan, George E.....	McHenry
Herman, John W.....	Swanton	Soelter, Ernest.....	Red House
Hetrick, John.....	Bitteringer	Stanton, C. E.....	Grantsville
Hoye, Frank.....	S/W of St. John's Rock	Steyer, W.T.....	Deer Park
Humbertson, Frisbee.....	Asher's Glade	Tasker, Michael.....	Deer Park
James, Jes A.....	Frostburg	Teets, Earl F.....	Lake Ford
Jenkins, J.A.....	Morris Hill	Tichinel, G.W.....	Mt. Zion Church
Kerins, G.T.....	Oakland	Tichnell, Delbert.....	Bloomington
Knox, C.H.....	Vindex	Turner, Francis H.....	Swanton
Lowdermilk, J.M.....	Asher's Glade	Upole, Layman.....	Eagle Rock
McClintock, E.F.....	Cave	Upole, W.M.....	White Rock
Mellott, M.T.....	Hutton	Wiley, Milton.....	Grantsville
Merrill, John A.....	Merrill	Wilson, D.W.....	Wilson, West Virginia
Michael, Peter F.....	Big Savage Mountain	Wilson, Milo.....	Kitzmiller
Michael, W.A.....	Bloomington	Wilt, George Plucky.....	Kitzmiller
O'Brien, John T.....	North Glade	Winters, R.T.....	Swallow Falls

Volunteer Forest Wardens who served in Allegany County at sometime between 1910-1926

Alderton, Mahlon.....	Picardy	Duckworth, John William**.....	Lonaconing
Avery, H. B.....	Mount Savage	Fazenbaker, Henry H.....	Lonaconing
Barnes, Perry.....	Town Hill	Fletcher, Courtney A.....	Piney Grove
Barton, George M.....	Barton	Frazee, W. LeRoy.....	Town Creek
Beeler, W.L.....	South Martin's Mountain	Grabenstein, E.F.*.....	Winchester Bridge
Bender, Daniel.....	Rush	Gross, M.L.....	Martin's Mountain
Blubaugh, A.F.....	Warrior Mountain	Hartley, Wm. M.....	White Oak Flat
Blubaugh, J. W.....	Loar Town	Helmstetter, J. Jerome.....	Cash Valley
Bodkin, Brook*.....	High Rock	Hinkle, George L.....	Cumberland
Bodkin, G.H.....	Dawson	Hutson, Frank M.....	Rawlings
Brant, J.A.....	Ellerslie	James, Joseph A.....	Frostburg
Bridges, A.J.....	Mt. Savage	Krumbine, H.S.*.....	Gilpin
Burkey, Thomas*.....	Corriganville	Krumbine, Harry Z.*.....	Gilpin
Davis, Frank B.*.....	Pratt	Krumbine, Thomas*.....	Cumberland
Dean, I.S.....	Old Town	Lambert, L.C.....	Stoney Run
Degen, C.G.....	Warrior Mountain	Lammert, Roland A.*.....	Frostburg
Drake, C.E.....	West of Evitts Mountain	Lancaster, John.....	Eastside Dan's Mountain

*Federally paid forest patrolman

**Lookout Watchman

Volunteer Forest Wardens who served in Allegany County at sometime between 1910-1926

Larner, W. P.....	Warrior Mountain	Reidler, Sr., George.....	Frostburg
Llewellyn, C. E.*	Midland	Robinette, F.W.	Centerville
Llewellyn, D.C.....	Midland	Robinette, George B.*	Town Creek
Llewellyn, H.P.....	Dan's Mountain	Sheetz, Conrad.....	Warrior Mountain
Llewellyn, Perry P.....	Barton	Smith, Elmer B.	Green Ridge
Llewellyn, Stephen	Barton	Spier, John.....	Cumberland
Lough, W. P.....	Gilpin	Stotler, Floyd.....	Dawson
Lowery, Al M.	Clarke Mills	Struckman, A.	Upper Town Creek
Malcolm, J. H.	Town Hill	Stubbs, R.H.	Warrior Mountain
Martin, Mathew E.....	Gilmore	Sullivan, Daniel.....	Evitts Creek
Mayer, G.M.*.....	Frostburg	Twigg, Edmund*.....	Town Creek
McCabe, Michael.....	Green Ridge	Twigg, L.C.	Old Town
McCusker, E.C.....	Little Orleans	Twigg, William A.	Warrior Mountain
McElfish, D.D.	Shriver's Ridge	Wagus, Adolph.....	Midland
McElfish, Henry*	Flintstone	Weir, Walter	Lonaconing
Michael, Wm. A.....	Westernport	Wentling, Bern A.*	Nicholas Mountain
Morgan, J.A.*.....	Midlothian	Wentling, Floyd*.....	Nicholas Mountain
Morton, James.....	Frostburg	Wigfield, G.E.....	Nicholas Mountain
Mott, L.O.	Twenty-First Bridge	Witt, Anthony.....	Ellerslie
Mullan, V.L.**	Midland	Yeargan, W.F.....	Pleasant Valley

Volunteer Forest Wardens who served in Washington County at sometime between 1910-1926

Bishop, Fillmore.....	Hancock	Martin, F.D.*	Indian Springs
Bishop, M.F.....	Harvey	McAllister, Wm. S.*.....	Big Pool
Brunner, Charles D.*.....	Pondsville	McClain, L.C.....	Edgemont
Coulter, Milton S.*	Weverton	McCusker, Marshall O.	Exline
Creek, Aubrey	Forest Park	Nave, J.W.....	Mt. Briar
Detrow, Samuel.....	Hagerstown	Norris, Calvin*.....	Sideling Hill
Eichelberger, Jacob	Blairs Valley	Norris, George	Sideling Hill
Exline, B. Hayes.....	Tonoloway Bridge	Oswald, E.I.	Chewsville
Faulder, C.H.*.....	Mt. Lena	Phillips, Preston R.*	Brownsville
Frownfelter, Samuel D.....	Hagerstown	Reel, Charles R.*	Hancock
Fulton, A.J.*	Millstone	Shadrack, B.F.	Maugansville
Funkhouser, V.G.	Big Pool	Smith, Charles L.	Clear Spring
Gehr, Raymond.....	Mt. Carmel	Smith, Elmer.....	Millstone
Glenn, Ira S.....	Pondsville	Sowers, F.A.....	Hearthstone Mountain
Green, Daniel H.	Appleton	Sowers, M.L.	Ft. Hearstone
Hardy, B.....	Chestnut Grove	Spicer, E.B.*	Pearre
Hull, B.Z.*	Moorsville	Steele, Wm. E.....	Blair's Valley
Johnson, Ray*	Indian Springs	Stine, H.E.	Rohrerville
Keller, James R.*.....	Dargan	Weller, Harry E.	Hancock
Kendall, Vernon	Euclid	Willard, G.A.*.....	Smithsburg
Mann, Grover Cleveland*	Fort Frederick		

*Federally paid forest patrolman

**Lookout Watchman

Volunteer Forest Wardens who Served in Frederick County at sometime between 1910-1926

Andrew, George W.*.....Emmitsburg	Klein, Charles E.Braddock Heights
Andrews, R.C.*Eyler Valley	Lewis, Levin T.*.....Middlepoint
Benner, William H.....Catoclin Furnace	Lovell, J.F.Garfield
Brown, Earle*Lantz	McBridge, A.M.Locust Valley
Brown, Karl M.Foxville	McGill, Wm. McP*Catoclin
Bussard, S.P.**Lantz	Miller, Lewis D.Bolivar
Carroll, WilliamMt. St. Mary's College	Moore, David M.Brunswick
Creager, J. Howard.....Thurmont	Morgan, R.E.Sensenbaugh
Davis, R. H.Barnesville	Moss, Sylvester*.....Yellow Springs
Delauter, JamesGarfield	Munk, Wm. P.....Shookstown
Easterday, A.J.Wolfsville	Myers, Harry L.....Point of Rocks
Feaga, Elmer B.**Yellow Springs	Poole, C.E.Sugar Loaf Mtn.
Fitez, R.G.....Mt. St. Mary's College	Ramsburg, G.W.Lewistown
Fraley, F.W.*Catoclin	Ramsburg, George W.Lewistown
Freshman, M.H.....Thurmont	Recher, John L.....Thurmont
Funk, C.F. Walter.....Parks Mills	Sensenbaugh, J.J.....Euclid
Gaver, Charles R.*Highland	Sensenbaugh, L.T.*Euclid
Harne, C.O.*Garfield	Smith, Vernon.....Lewistown
Harne, Gideon O.....Point of Rocks	Thomas, A.M.....Sugar Loaf Mtn.
Hauver, Albert L.*.....Foxville	Wallace, J.J.....Burkittsville
Hoffman, L.N.....Doubs	Wallace, Charles T.....Burkittsville
Kelbaugh, Charles F.....Thurmont	Willard, G.H.....Foxville
Kelly, John.....East Mountindale	Willard, G.A.*Catoclin Furnace
Klein, C. Cyl*Frederick	

Forestry Supervisors—Garrett County (Chief Rangers)

Sines, Abraham LincolnChief Forest Warden
Upole, Sr., Elmer H.....Forestry Supervisor, Garrett County
Upole, Jr., E. HarlandForestry Supervisor, Garrett, Allegany, Washington, and Frederick Counties

Forest Rangers—Garrett County

Ashby, Ward L.	Handwerk, Owen R.	Upole, E. Harland
Bond, Richard D.	McDonald, Harold Jr.	Upole, Louise
Custer, Floyd	Schoch, Rolland G.	Walters, John C.
Dorsey, Wade	Thomas, Charles C.	
Fike, Dale E.	Thomas, Charles R.	

State Forest Superintendents/Managers in Garrett County

Potomac State Forest Superintendents/Managers

Denning, John	Ramsey, Cecil Z.
Hamilton, Steven	Wilt, Myrl J.
Lohr, W. Carlton	

Savage River State Forest Superintendents/Managers

Cryer, Oscar M. (Skip)	Groves, Warran	Upole, Jr., E. Harland
Denning, John	Martin, Sr., Matthew E.	
Gregory, Michael	Maxim, Larry	

*Federally paid forest patrolman

**Lookout Watchman

State Park Superintendents/Managers in Garrett County

Swallow Falls State Forest - (aka) Garrett State or Potomac State Forest Superintendents/Managers

Denning, John	Meechan, Joseph	Sines, Abraham Lincoln
Hamilton, Steven	O'Haver, John	Sword, Gerald
Martin, Jr., Matthew Ellis	Riley, Roger	Thomas, Charles C.

Regional State Park Managers (Western Operations)

Anderson, Chris
 Ecker, Cynthia L.
 Harris, Charles (Chuck), Regional Deputy Manager

Herrington Manor/Swallow Falls State Parks Superintendents/Managers

Hamilton, Steven	O'Haver, John	Sword, Gerald
Hartman, Kenneth	Preston, Alan (Al)	Thomas, Charles C.
Martin, Jr., M. Ellis	Riley, Roger	
Meechem, Joseph	Sines, Abraham Lincoln	

New Germany/Big Run State Parks Superintendents/Managers

Cryer, Oscar M. (Skip)	Ironside, Mary M.	Rogers, James
Edminston, Perry	Martin, Sr., Matthew E.	Upole, Jr., E. Harland
Gregory, Michael	Preston, Alan (Al)	

Deep Creek Lake State Parks Superintendents/Managers

Ashby, Ward L.	Matthews, Carolyn
Baker, David	Wilburn, James O.
Durham, Jr., Paul D.	

Deep Creek Lake Natural Resources Management Area Managers

Durham, Jr., Paul D.	Schwaab, Eric
Gregory, Michael	Yoder, Gary
Mathews, Carolyn	

State Park Rangers in Garrett County

Herrington Manor/Swallow Falls State Parks—Rangers

Ashby, Ward L.	Custer, Floyd	Sines, Richard E.
Berry, Michael	Foley, John	Stark, Harold
Baker, Lisa	Friend, Robert (Bob)	Steyer, Sue
Blizzard, Caroline (Naturalist)	McMillan, Timothy	Thomas, William C.
Broadhurst, Cynthia L.	Meyers, Kenneth	Wakefield, Richard
Cooper, Michael	Savage, Eric (Naturalist)	Zimmerman, George W.
Custer, Dale H.	Schultz, Otto	

New Germany/Big Run State Parks—Rangers

Baker, David	Martin, William (Naturalist)	Stevens, Joseph R.
Broadwater, Glenn William	McCormick, Melissa	Thomas, Charles R.
Dore, Mary Ellen	McDonald, Jr., Harold	Thomas, J. Erin
Frank III, John H.	Saunders, Campbell A.	Warnick, Robert (Bob)
Lewis, Richard R.	Savage, Eric (Naturalist)	Warnick, Wilson

Deep Creek Lake State Parks—Rangers

Baker, David W.	Friend, Brian	Rexrode, George A.
Blizzard, Caroline (Naturalist)	Gowans, Thomas E.	Riley, Darryl
Burrell, David K.	Mash-Manown, Patty	Skipper, Connie
Caple, Wayne H.	Metz, Christopher Todd (Naturalist)	Walker, Carole L.
Christensen, Karl	McMillan, Mark	Wilburn, James O.

Forestry Supervisors in Allegany County and Washington County

Bodkin, Brook (Covered Allegany and western Washington Counties)
 Upole, E. Harland (Covered Garrett, Allegany, Washington and Frederick Counties)

Forest Rangers in Allegany County

Brown, George	Fletcher, Marshall	Robeson, Owen B.
Caton, James F.	Glass, Walter C. (Pete)	Slider, William (Bill)
Dixon, Tom	McDonald, Harold L. Sr.	

Green Ridge State Forest Superintendents/Managers

Beals, Mark	Johnson, Ray	Sipes, Eugene
Floyd, Custer	Mash, John	Zumbrun, Francis
Hartman, Harry	Robertson, Herb	

Green Ridge State Forest Rangers and other key staff

Bowman, Reese (Mechanic)
 Roland, Robyn (Office Manager)

Rock Gap and Dan's Mountain State Parks Superintendents/Managers

Boyer, Donald	Maas, Mark
Cihlar, William	Riley, Harold
Deckelbaum, Michael R.	

Rocky Gap and Dan's Mountain State Parks Rangers

Amann, John L.	Morgan, Jr., Charles T. (Maintenance Chief)
Baumann, W. David (Conservation Aide)	Moses, Terry M.
Cage, Harry	Mossburg, Ken
Deckelbalm, Michael R.	Norris, Alicia
Dieterle, Curt W.	Rexroad, George
Gregory, Kristen	Ruark, Jeffery
Herndon, Jeffery	Miller, Shelly (Naturalist)
House, Robert S.	Shoemaker, Harold W. (Maintenance Supervisor)
Livingston, Elizabeth	Yoder, Dennis (Park Technician III)
Milbourne, Sarah	

Forest Rangers in Washington and Frederick Counties

Barnhart, Sam E.	Hill, Richard A.
Burch, ??	Morgan, Larry