

= Mingo Oak =

The Mingo Oak (also known as the Mingo White Oak) was a white oak (*Quercus alba*) in the U.S. state of West Virginia . First recognized for its age and size in 1931 , the Mingo Oak was the oldest and largest living white oak tree in the world until its death in 1938 .

The Mingo Oak stood in Mingo County , West Virginia , in a cove at the base of Trace Mountain near the headwaters of the Trace Fork of Pigeon Creek , a tributary stream of Tug Fork . The tree reached a height of over 200 feet (61 m) , and its trunk was 145 feet (44 m) in height . Its crown measured 130 feet (40 m) in diameter and 60 feet (18 m) in height . The tree 's trunk measured 9 feet 10 inches (3 @. @ 00 m) in diameter and the circumference of its base measured 30 feet 9 inches (9 @. @ 37 m) . Assessments of its potential board lumber ranged from 15 @, @ 000 feet (4 @, @ 600 m) to 40 @, @ 000 feet (12 @, @ 000 m) . Following the tree 's felling in 1938 , it was estimated to weigh approximately 5 @, @ 400 long tons (5 @, @ 500 t) .

While the tree had long been known about for its size , the unique status of the Mingo Oak was not recognized until 1931 , when John Keadle and Leonard Bradshaw of Williamson took measurements of the tree , and found it to be the largest living white oak in the world . Various estimates place the Mingo Oak 's seeding between 1354 and 1361 AD . Using borings from the tree , the Smithsonian Institution determined that the Mingo Oak was the oldest tree of its species . The Island Creek Coal Company , the North East Lumber Company , and the Cole and Crane Real Estate Trust leased 1 @. @ 5 acres (0 @. @ 61 ha) encompassing the tree to the West Virginia Game , Fish , and Forestry Commission for it to be managed as a state park for the life of the tree . The commission cleared the surrounding land and made improvements such as seating and picnic accommodations for visitors .

By the spring of 1938 , the Mingo Oak failed to produce leaves , and on May of that year , West Virginia state forester D. B. Griffin announced the tree 's death . The prevailing theory is that the tree died from the release of poisonous gases and sulfur fumes from a burning spoil tip in nearby Trace Gap . The tree was felled with fanfare on September 23 , 1938 , with transections being sent to the Smithsonian Institution and the West Virginia State Museum . Under the terms of the Island Creek Coal Company 's lease with the West Virginia Game , Fish , and Forestry Commission , the land 's lease around the former tree reverted to the company following the tree 's felling .

= = Geography and setting = =

Prior to the arrival of European American settlers and explorers , the Allegheny Plateau region of West Virginia , lying to the west of the Allegheny and Cumberland mountain ranges of the Appalachian Mountains , was overlaid with old @-@ growth forests consisting predominantly of deciduous mixed oaks and chestnut trees . The cove forests of the Appalachian Mountains were undisturbed for approximately 300 million years , and the ample moisture and deep soils of cove topography allowed for the proliferation of temperate broadleaf and mixed forest species .

The largest of the tree species in this virgin timbershed was the white oak (*Quercus alba*) , which often exceeded 100 feet (30 m) in height and 6 feet (1 @. @ 8 m) in diameter . While the white oak 's range encompasses most of the Eastern United States , the most favorable environments for its growth are on the western slopes of the Appalachian Mountains . According to botanist Earl Lemley Core , the species flourishes on northern mountain flanks , and in coves , which are small valleys or ravines between two ridge lines that are closed at one or both ends . White oaks also thrive in moist lowlands and in upland topography , with the exception of extremely dry ridges with shallow soil .

The Mingo Oak , known alternatively as the Mingo White Oak , was a white oak that stood in such a cove at the base of Trace Mountain on a shelf near the headwaters of the Trace Fork of Pigeon Creek , a tributary stream of Tug Fork . The tree was located near the census @-@ designated place of Holden , 10 miles (16 km) from Logan and 1 mile (1 @. @ 6 km) from the Logan County line in Mingo County , from which it took its name . The county was in turn named for the Mingo Iroquois peoples , of which Native American war leader Logan was affiliated . Holden was the base

of operations of the Island Creek Coal Company , which leased the land where the tree was located

= = Dimensions and age = =

The Mingo Oak was the largest specimen of these giant white oaks that dotted the old @-@ growth forests of pre @-@ settlement West Virginia . The tree was found to be the largest living white oak in the United States , and in the world , following a survey of white oaks throughout the country . The Mingo Oak 's nearest competition was a tree that was identified in Stony Brook on Long Island with a larger circumference , but a shorter height of 86 feet (26 m) .

Together with its uppermost branches , the tree reached a height of over 200 feet (61 m) , and its trunk (or bole) towered to a height of 145 feet (44 m) where the trunk forked into branches that spread in all directions . Its crown measured 130 feet (40 m) in diameter and 60 feet (18 m) in height . The tree 's trunk measured 9 feet 10 inches (3 @.@ 00 m) in diameter . The tree 's circumference measured 30 feet 9 inches (9 @.@ 37 m) at the base and 19 feet 9 inches (6 @.@ 02 m) at 4 @.@ 5 feet (1 @.@ 4 m) from the ground . As the virgin forest around it had been lumbered , the tree towered over the surrounding secondary forest .

An initial estimate by lumbermen in 1931 stated that if the tree were to be cut for lumber , it would produce between 35 @,@ 000 feet (11 @,@ 000 m) and 40 @,@ 000 feet (12 @,@ 000 m) of board lumber , with a value of \$ 1 @,@ 400 . In February 1932 , Perkins Coville of the United States Forest Service Department of Silvics estimated the tree 's volume to contain 20 @,@ 000 feet (6 @,@ 100 m) of board lumber . In 1938 , engineers of the Island Creek Coal Company estimated that the tree 's trunk contained 15 @,@ 000 feet (4 @,@ 600 m) of board lumber . Following the tree 's felling in 1938 , it was estimated to weigh approximately 5 @,@ 400 long tons (5 @,@ 500 t) .

Various estimates place the tree 's seeding sometime between 1354 and 1361 AD . Using borings from the tree , the Smithsonian Institution determined that the Mingo Oak was the oldest tree of its species . In September 1932 , West Virginia state forester D. B. Griffin and Emmett Keadle , president of the Mingo County Fish and Game Protective Association in Williamson , used an increment borer to estimate the tree as having begun its growth around 1356 , with a margin of error within 25 or 30 years . Blueprints and boring samples were given to the West Virginia State Museum in Charleston and to the Smithsonian Institution in Washington , D.C.

= = Preservation attempts = =

Ownership of the timber land around the tree was eventually acquired by the Cole and Crane Real Estate Trust , which leased the timbering rights to the North East Lumber Company . Under the lease agreement , the North East Lumber Company only paid for the lumber that it cleared from the land . The company found the Mingo Oak too large to cut down , and assessed that its removal was too costly to undertake . The Cole and Crane Real Estate Trust also leased out the land where the tree was located to the Island Creek Coal Company for mining .

The land around the tree continued to be developed . A highway connecting Logan to Williamson , was built parallel to the Trace Fork of Pigeon Creek , opposite the Mingo Oak . While the tree had long been known for its size , the unique status of the Mingo Oak was not recognized until 1931 , when John Keadle and Leonard Bradshaw of Williamson took measurements of the tree , and found it to be the largest living white oak in the world . Upon this finding by the two men , Cole and Crane Real Estate Trust and the Island Creek Coal Company agreed to make a joint deed conveying the property to the state of West Virginia . In late 1931 , Emmett Keadle of the West Virginia Oil and Grease Company wrote a letter to Governor William G. Conley informing him of the tree 's significance and the companies ' willingness to lease the land to the state . Governor Conley responded to Keadle and suggested the companies convey the property to the West Virginia Game , Fish , and Forestry Commission .

The Island Creek Coal Company , the North East Lumber Company , and the Cole and Crane Real

Estate Trust leased to the commission 1 @. @ 5 acres (0 @. @ 61 ha) encompassing the tree for it to be managed as a state park for the lifetime of the tree . The commission removed vegetation from the immediate land around the tree , constructed a fence around the plot , and built a bridge crossing the Trace Fork of Pigeon Creek so that motorists could access the park from the highway . The state built cooking ovens , picnic tables , and benches along the tree 's southern slopes . Also , due to its enormous size and advanced age , the Mingo Oak acquired spiritual and inspirational significance . It became a place of worship , and a pulpit and benches were built beneath its branches . During the summer months , outdoor sermons were delivered by preachers at the tree . The Mingo Oak was also credited with raising awareness of conservation .

The Mingo Oak became a popular attraction for visitors . Conferences , such as the annual conference of the West Virginia Parent @-@ Teacher Association in 1933 , included visits to the tree as part of their itineraries .

= = Death = =

In the summer of 1937 , the Mingo Oak scarcely sprouted leaves on only a couple of its branches . In February 1938 , biologist Earl M. Vanscoy wrote in *Castanea* that the tree was " almost dead " due to the release of poisonous gases and sulfur fumes from a coal spoil tip of the Island Creek Coal Company , which had been burning nearby in Trace Gap . In the spring of 1938 , the tree failed to produce any leaves . White oaks flower in the spring at approximately the same time as their leaves form , between late March and late May . On May 4 , 1938 , West Virginia 's state forester , D. B. Griffin , announced that the Mingo Oak was dead . Griffin also noted that a fungus that only lived on dead or dying trees had been present on the tree for several months prior to its death . The prevailing theory is that the tree died as a result of suffocation from the fumes of the burning pile of coal waste ; however , local media initially reported that the tree was killed as a result of fungal growth .

= = Felling = =

In preparation for the tree 's felling , some preliminary cutting was undertaken in the tree 's north side in the afternoon hours of September 22 . This work was done in order to manipulate the course of the tree 's fall , and to estimate the length of time it would take to cut through the remainder of the trunk . After a saw had been worked approximately 2 feet (0 @. @ 61 m) into the trunk , it was discovered that the tree was decomposing and open in its center . The lumber crews trimmed the tree 's initial cut , and the further work to topple the tree was adjourned until the following morning .

The tree was felled on September 23 during a ceremony attended by between 2 @, @ 500 and 3 @, @ 000 people . Among those in attendance were state forester D. B. Griffin , the president of the Island Creek Coal Company , E. P. Rice , and representatives from other companies that had previously owned and leased the land where the tree was located . In addition to standard cameras photographing the event , two movie cameras were brought to capture the felling and its associated events . Uniformed West Virginia Game , Fish , and Forestry Commission officers , Mingo County sheriffs ' deputies , and other law enforcement personnel were also on hand to provide security and direct traffic .

Two lumberman were brought in to facilitate the cutting and toppling of the tree : Paul Criss of Charleston and Ed Meek of Indianapolis . Criss brought with him a team of woodchoppers and sawyers representing the Kelly Ax and Tool Works Company . Criss was a public relations spokesperson for the Kelly Ax and Tool Works Company . Meek arrived with his own crew from the E. C. Atkins and Company , a saw manufacturer . Griffin also enlisted the assistance of a crew of game wardens and rangers . A nearby Civilian Conservation Corps camp also provided a team to assist in the felling and dismemberment of the tree . The E. C. Atkins and Company also brought a 9 @-@ foot (2 @. @ 7 m) saw . Most of the readily available crosscut saws measured 6 feet (1 @. @ 8 m) in length , thus rendering them ineffective at cutting through the tree 's wide trunk , which measured over 6 feet (1 @. @ 8 m) in diameter 3 feet (0 @. @ 91 m) from the ground .

Prior to the tree 's cutting , Criss shaved Meek 's face with his axe . He lathered Meek 's face and neck and moved his axe blade over Meek 's bristles , drawing blood at his chin line . Criss commented : " That 's the trouble with having a lot of officials around . I 've shaved a thousand men with that axe and that 's the first time I ever drew blood . These officials get me a little nervous . "

By 09 : 00 , hundreds of people had arrived to observe the tree 's toppling . At 10 : 00 , the final cutting commenced . Criss decided to topple the tree downhill onto a ledge , which narrowed between the two ravines that emptied into Trace Fork . While it was assessed that the shelf was not long enough for the tree to land on , it was agreed upon by all the participants that given the rotten nature of the tree 's top section , it would fracture notwithstanding the orientation of its fall . Prior to Criss cutting further into the tree , he assured the crews : " I can put her anywhere you want her gentlemen . Lay a \$ 10 bill anywhere you like and I 'll guarantee the trunk will cover it . "

The cutting of the tree began when the 9 @-@ foot (2 @.@ 7 m) saw , operated by six men , was positioned across the trunk . The saw penetrated the trunk , and the adjacent area was cleared of bystanders . The spectators were repositioned up the hillside to the south and across the ravine to land that had previously been cleared by the Civilian Conservation Corps camp . The men moved the saw backward and forward , as woodchoppers widened the open wedge . After approximately 30 minutes , Criss yelled , " We 're through boys . " The men removed the saw , and the woodchoppers continued to pick at the open wedge . The tree made a crackling sound , its upper limbs dipped , and the Mingo Oak crashed onto its designated felling location . While it had been intended that the tree be down by 10 : 30 , it was not until 11 : 00 that this occurred . To assist in the segmentation of the collapsed tree , competitions were held in woodchopping and log sawing . Saw manufacturer E. C. Atkins and Company furnished saws for the competitors .

Because of the tree 's advanced decomposition within the center of its base , the trunk 's lowest 24 feet (7 @.@ 3 m) were assessed to be worthless ; however , 66 feet (20 m) of the trunk was salvaged in one entire piece . Another cutting yielded a 40 @-@ foot (12 m) log in length , that averaged 54 inches (140 cm) in diameter . The Island Creek Coal Company sent the 66 @-@ foot (20 m) log to the Meadow River Lumber Company plant in Rainelle , which had the largest cutoff saw in the Eastern United States . From this log , transections were cut , and other divisions of it produced lumber , tabletops , and novelty items . Various segments of the tree were cut and given to the West Virginia State Museum and the Smithsonian Institution .

= = Legacy = =

The Mingo Oak was the largest living white oak ; and with the exception of the state 's box huckleberries (*Gaylussacia brachycera*) , it was the oldest living flora specimen in West Virginia . The tree was referred to as the " mighty monarch of the mountains " . Biologist Earl M. Vanscoy said that the tree was " perhaps West Virginia 's most remarkable tree " ; and Colby B. Rucker of the Native Tree Society referred to the Mingo Oak as an " exceptional forest giant " .

Under the terms of the West Virginia Game , Fish , and Forestry Commission 's lease from the Cole and Crane Real Estate Trust , the North East Lumber Company , and the Island Creek Coal Company , the lease for the land around the former tree reverted to the Island Creek Coal Company following the tree 's death and felling .

In 1940 , a club of whittlers presented a gavel made from a piece of the Mingo Oak to federal judge Harry E. Atkins in Huntington . Several of the club 's whittlers had served as members of the jury during Atkins 's court proceedings , and they presented the gavel as a token of their appreciation .

The West Virginia Division of Culture and History installed a historic marker as part of the West Virginia Highway Historical Marker Program near the site of the Mingo Oak ; it has since gone missing . The marker read :

The largest white oak in the United States when it died and was cut down , 9 @-@ 23 @-@ 1938 . Age was estimated to be 582 years . Height , 146 feet ; circumference , 30 feet , 9 inches ; diameter , 9 feet , 9 1 / 2 inches . Trunk contained 15 @,@ 000 feet B. M. lumber .