

Tiny Cedar Found To Have 171 Rings

Special to the Gazette. 1-26-38

Dardanelle, Jan. 25.—One of the five little cedars on top of the large boulder known as the Twin Rocks at the base of Dardanelle Rock and on the edge of the Arkansas river, was torn from its anchorage by the wind and was found by William Shallenberg, Dardanelle naturalist.

Curious to determine the age of the cedars, which were mentioned by Thomas Nuttall, F. L. S., an English naturalist, geologist and scientist who came to what is now the site of Dardanelle in 1819, Mr. Shallenberg sawed through the tree near its roots and found the cedar to be 171 years old by his calculation of ring markings. The trees have been objects of historical interest since Mr. Nuttall's visit and their picture appears on postcards sold here. The cedars have survived despite a scant deposit of soil and leaf mould for their roots.

State Leads in Private Forests

Democrat 12-29-40

Arkansas forest industries pioneered in the practice of private forestry, and the state maintains a commanding lead in this practice among the Southern states, based on available data for the years 1934-39, declared Richard D. Stevens of the University of Arkansas college of agriculture.

The 11 states comprising the region are Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North and South Carolina, Oklahoma, Tennessee and east Texas.

"Arkansas' leading position among these states could not be maintained if the forest fire protective organization in the state were not effective," the assistant forester said, "for the practice of forestry cannot be successful without adequate protection of the forest from fire.

"Indeed, someone has estimated that an investment of four cents an acre in fire protection will net a return of 30 cents an acre from reduced fire loss."

The organization charged with the responsibility of protecting the forests in the state is the Arkansas Forestry Commission, which was established in 1933 and is supported by state, federal, and private funds.

It functions, for the greater part, in those areas where private industry has a sufficient interest to furnish their share of the necessary cost.

Its effectiveness is evident, Mr. Stevens observed, in the fact that while the percentage of burn in protected areas in the state was less than in the other 11 states for four years out of the six, the state's appropriation per acre for protection purposes is sixth in the list of 11 states.

High Rank for Arkansas.

Arkansas had the lowest percentage of burn in all years except 1934 and 1936, when it had next to the lowest percentage.

The South, as a whole, leads the nation in percentage of forest land burned annually. "This," Mr. Stevens explains, "is partly because of its long season of fire hazard, and partly because of a strong, ingrained desire among many of the inhabitants to burn-over woods.

"These problems are as active in Arkansas as in the remainder of the states making up the Southern region, and it is fair, then, to measure the effectiveness of forest fire control in Arkansas by comparing its percentage of burn with that of the other states in the region."

Actual percentage figures fluctuate from year to year, depending largely on weather conditions, but the steady trend toward more effective protection is well marked throughout the region, Mr. Stevens pointed out. The best year was 1937, with an average percentage burned of 1.1 for the region, while the worst year was 1934, with a percentage of 3.4.

"The whole state shares in the benefits derived from this fire protection, because it enables our forest industries to maintain their establishment on a perpetual basis; and these industries make up a large part of the industrial wealth of the South," the forester said.

Third Eye Found in Head Of Prehistoric Reptile

Norman, Okla., April 22 (AP).—Discovery of a 12-foot fossilized Permian reptile with a third "eye" in the middle of its head was reported today by J. Willis Stovall, paleontologist at the University of Oklahoma. Stovall said the socket of the third eye, atop the head behind the other two, was so large that "the eye probably was functional."

He said the reptile, found near here, was the largest Permian vertebrate ever found in America. The bones were found together.

Survey Discovers Jaw of Mastodon

Discovery of the jaw of a mastodon, extinct elephantlike animal, in Lee county was reported yesterday by R. C. Beckstrom, director of a statewide WPA mineral survey. The discovery was made by field workers during a routine survey of Lee county. The jaw was brought to Little Rock and placed on display at state headquarters in the Hoffman hotel, 115 North Victory street.

The mastodon is described as differing from the mammoths and present-day elephants in the molar teeth. Abundant remains of the American mastodon including several nearly complete skeletons have been found.

Luxuriant Growth of Arkansas Forests Began in Ancient Past as Revealed by Buried Remains of Petrified Trees

Democrat 6-12-38
By PAUL HADLEY.

When old Mother Nature designed Arkansas, she gave it a rich blessing. She made it a land where forests flourish.

For generations our forests have been giving their strength and beauty to the fabric of the state's life. From them we have taken homes, hearth-fires, industries and payrolls through more than a century of changing fortunes.

And still our forests endure, providing the material for new demands—paper mills, chemical plants, and others—which were undreamed when the pioneers first swung their axes into the dark walls of pine, cypress and oak.

Nature, as if to emphasize that Arkansas is a forest land, left here, long ages ago, a token of this boon she conferred on the state. She turned to stone—petrified—an ancient Arkansas forest, as though to declare to all who might ever forget it, that our misted hills and broad valleys and lowlands were made to grow trees as one of their important crops.

Little Known in State.

Everybody has heard of the petrified forest of Arizona, but that Arkansas has a petrified forest is a little known fact. Yet there is such a forest in the northeastern part of the state, the extent of which has never been determined, because the huge stone trees and logs, are, with few exceptions, buried several feet deep, and are only turned up during excavations or when erosion washes the surface earth away.

In the hills of the Crowley Ridge section surrounding Piggott, in Clay county, many of these petrified logs, some of which measure more than two feet in diameter, have been found. Like the stone trees in Arizona's famous forest, the Clay county petrified logs are all found lying down, most of them broken into short lengths, evidently by some vast cataclysm of long forgotten ages.

So far, all those unearthed are apparently some species of hickory, and many are so well preserved that bark, weather cracks, and knots can be plainly distinguished.

One such log, about 12 feet in height, has been mounted on a concrete base in the courtyard in Piggott, where it never fails to attract attention from all who pass through. A marble slab is inlaid in the surface of the tree, inscribed with the names of the city and county officers, as well as of those who were instrumental in placing this unique town monument before the eyes of the world.

Provide Building Stone.

Like many other natural curiosities which attract visitors from afar, the petrified forest of Arkansas is with few exceptions little thought of by the people who daily come into contact with the trees.

Farmers who find the hunks of stone in rain-washed gullies, will occasionally drag them out and break them up to use as building stone. A hunter will now and then stop to rest on one in some woodland glade, and possibly remark to a companion, "Aw, that's just an old petrified tree," and give it no further thought.

In the old Lorraine cemetery in Piggott, several fragments of small petrified trees are used as tombstones. One local man has a small collection in his yard. The Clay

county float at Governor Bailey's inauguration last year featured the petrified forest with a nice display of some of the rocks artistically mounted.

In many sections of the state, other petrified objects are found. Petrified sweet potatoes, bugs, small shellfish, and other objects are quite common.

Several years ago, the author lived in the Ozark foothill town of Imboden. In the back garden of his home, which was situated on top of a rocky hill, were picked up many specimens of what had evidently been shellfish in past ages.

Dozens of spiral snails, periwinkles, and other species of shellfish so far unidentified, were picked up on that hilltop, giving rise to speculations as to whether the rocky height was not at some time in the distant past a part of the ocean.

Once Under Salt Water.

In the case of the petrified trees in the Crowley Ridge section, it is accepted as a fact that many thousands of years ago, the entire northeastern section of the state from the foothills of the Ozarks west of Black River eastward, was under what is now known as the Gulf of Mexico, which then reached hundreds of miles north of its present boundary.

This is known by the geological formation of the ridge, which in many places consists of huge hills of almost pure water-worn gravel and sand. It is in this formation that the petrified trees are found, often buried deep down under a hill of gravel.



In Piggott they mounted this "stone" tree of the state's remote past on a concrete base, where it is an object of interest to visitors who pass through the town.

How interesting it would be to know just how and when the trees got there! And whether they were growing on the spot where they now lie, or were washed there by some ancient tidal wave.

Just why things petrify is a mystery to many people. Of course, almost everyone knows that the object itself does not actually turn to stone.

What happens is this: As the moisture in the soil penetrates the cells of the objects, decay sets in, and cell by cell the original object disintegrates. But certain minerals in the soil, as lime and silica, are carried in solution by the water as it penetrates. Then, as each cell of the original tree, or whatever it may be, disappears, it is replaced by the mineral.

Every Detail Remains.

So there is gradually built up a stonelike object, the exact counterpart of the original object. Thus the trees exhibit the details of bark and wood that the real tree had when it started to decay, although all the material now in the object is mineral matter. While lime and silica are the main minerals, there may be traces of others that will give petrified things a characteristic coloring. Iron is the main one of these, and it imparts to the trees a yellowish or reddish color. Those of Arkansas are mostly of a cream color, as iron is not very abundant in the soil of Clay county, but in the Arizona forest the trees run the gamut of colors from yellow to deep red.

An odd thing about petrification is that while vegetable matter and cold-blooded animals such as reptiles, shellfish, worms, and such like will petrify, no instance is known of a warm-blooded creature ever "turning to stone." Many such things are heard of, but no case is known of such a claim being authenticated.

Fossilized Shark Teeth Found By Ashdown CCC Party.

Special to the Gazette. 7-28-38
Ashdown, July 27.—Randall Richmond, Ashdown CCC educational advisor, and Randall Stone, an enrollee, brought back a handful of fossilized shark teeth as the prize find of their expedition in the Brownstown-White Cliffs vicinity.

Specimens submitted to C. M. Barber, Hot Springs collector, were identified by him as "the teeth of *Lamna taxana*, a species of shark which lived in the vast cretaceous sea which covered this area ages ago."

The August number of *Hobbies*, the magazine for collectors, carried a picture showing some of the museum and hobby collections of Camp Ashdown.

Paleontology Experts Visit Arkansas

9-8-38

Somewhere along Little Crow creek, two miles east of Forrest City, St. Francis county, there existed some 75,000,000 years ago marine animals such as the primitive whale.

Pioneer citizens of that community probably could not be convinced of that statement but there came to Little Rock yesterday three persons who have proof that such animals existed.

They are Dr. Gilbert D. Harris, professor emeritus of paleontology and stratigraphic geology of Cornell University; E. Laurence Palmer, assistant professor of rural education at Cornell University and Mrs. Palmer, said by Dr. Harris to be one of the outstanding paleontology research workers in the world. All live at Ithaca, N. Y., site of the university.

They left Ithaca in a car Friday noon and arrived in Arkansas Tuesday afternoon. When they reached Little Rock they had traveled 1,476 miles. They are on a month's trip to do research work in Arkansas, Louisiana and Mississippi along geological lines. They are paleontologists and paleontology is a science that deals with the life of past geological periods.

Display Arkansas Finds.

A Gazette reporter was introduced to the visitors at the Alamo Plaza court last night by Dr. George C. Branner, state geologist. The New Yorkers displayed a collection of fossil shells along with the vertebrae of a large primitive whale, which they found around Little Crow creek. They plan to remain in Little Rock until noon today and then will visit White Bluffs near Redfield, Jefferson county. Their trip in Arkansas will take them through Cleveland county, El Dorado and to Shreveport, La.

Dr. Harris, 74, recalled that in 1892 he began work on a geological survey for Arkansas which was completed several years later. The report when published was titled, "Tertiary Formations of Southern Arkansas." At present Dr. Harris is interested in the development of the Paleontological Research Society which he founded in 1932.

Specimens To Be Studied.

When the month's research trip is completed, fossil specimens collected by the geologists will be taken to Ithaca to be studied. Mrs. Palmer ex-

plained that study of the collections will determine the probable number of geological formations existing in the area of the three states.

She explained that fossil collections are traces of impressions of an animal or a plant of past geological ages.

Through the geologists' work many natural resources are discovered and existing resources further developed. Dr. Branner said.

Fossil Oyster Beds In Crow Creek

2-23-39

Forrest City, Arkansas

Paragould Daily press

On U. S. Highway No. 70 approximately 44 miles west of Memphis and 83 miles east of Little Rock a concrete bridge crosses Crow creek, which is described as "a short, unimportant stream of St. Francis county." Across that bridge an average of 2000 automobiles speed every day, their occupants unconscious of the fact that that unimportant stream below is a graveyard of antiquity. The streambed and the banks contain the remains of an oyster bed of millions of years ago.

In September, 1938, while on a tour of the South, Dr. Gilbert D. Harris and Mr. and Mrs. E. Laurence Palmer, paleontologists from Cornell University, visited the area and estimated the deposit as being millions of years old. They took various specimens home with them for further study. (The science of Paleontology has to do with the study of the remains of plant and animal life from past geological periods).

Ever since the Gulf of Mexico receded from this part of the continent these oyster beds containing untold millions of fossil shells have been lying there, three and one-half miles east of Forrest City and plainly visible from the bridge.

Exposed for a mile or more at this particular point on Crow creek the oyster bed is a part of an immense deposit of fragmentary oyster shells laid down in a horizontal bed. The exposed banks of the stream disclose masses of shell firmly embedded in a bluish-gray clay in which glisten tiny particles of mother-of-pearl. Stretches of sandy beach along the water's edge are strewn with broken

prehistoric sea shells, some of which were of remarkable size. Whole oyster shells are occasionally found, measuring four inches across the hinge and 12 inches in length. From exposure to the atmosphere and elements most of the shells have become brittle and crumble at the touch or pull apart like wet paper. Oyster shells taken from the Atlantic Coast today between Long Island Sound and Florida are very similar in appearance to these shells which contained living organisms millions of years ago.

The shell deposit at Crow creek has a thickness of five feet and extends for considerable distance back into the bank. A similar deposit was reported found at a depth of 250 feet in a well dug at Forrest City.

Whence came oyster beds in Eastern Arkansas?

There was a time, millions of years ago when a part of the Gulf of Mexico extended inland as far north as Cairo, Ill. That this period lasted for millions of years is indicated by the thickness of the clay which was deposited as sediment on the bottom of the Sea.

Fresh water streams from the North flowed into this embayment, which covered all the

land now known as the Gulf Coastal Plain in which are now included Florida, Mississippi, Louisiana, the southern half of Georgia and Alabama, Eastern Arkansas and parts of Texas and Oklahoma. As the Gulf waters receded southward, the clay beds were exposed and became dry land, and the hardened sediment contained the remains of various forms of marine life.

The withdrawal of the Sea occupied an immense period of time and the land drainage from the North extended slowly, as the Sea withdrew. Eventually the drainage, particularly the Mississippi and Ohio rivers, carved out the soft coastal plains land and left Crowley

Ridge as an erosional remnant.

During the Glacial epoch either fresh water borne debris from the glaciers, or wind borne debris covered Eastern Arkansas with the so-called loess which caps Crowley Ridge. All but the Ridge capping was removed by south flowing drainage.

Among the artifacts recovered from Indian mounds, villages and burial grounds in Eastern Arkansas have been found many articles made of shells. Early archeologists and historical writers assumed that these Indians had come from, or had visited the Gulf Coast country, bringing the shells with them. But is it unlikely that they were taken from the region adjacent to the Crowley creek fossil shell beds?

The surveying crew in St. Francis county, under Lewis Bohlinger, District Supervisor of the State Mineral Survey, investigated the fossil shell deposit, measured its extent and sent samples of the shells and the soil impregnated with shell decomposition to the State Laboratory for analysis. The amount of this deposit has been estimated by the Survey at 6,833,000 cubic yards and is easily accessible, the main line of the Rock Island railway and U. S. Highway No. 70 passing through the section.

The chemical analysis shows this shell deposit to contain calcium carbonate, magnesium carbonate, iron oxide, phosphorus penta oxide, aluminum oxide, sodium oxide, potassium oxide and a relatively high per cent of insoluble. This composition should prove beneficial for liming the sour soil to the east and west of Crowley Ridge.

Interest has recently been stimulated by the work of the State Mineral Survey in St. Francis county. This statewide WPA project is sponsored by the State Geological Survey with State Geologist George C. Branner the director. Robert C. Beckstrom is the state supervisor and R. E. Vandruff is the technical supervisor. The state offices of the Mineral Survey are at 117 North Victory street, Little Rock, Ark.

Prehistoric Bed of Oysters Lies Beneath Main Highway

Democrat 2-23-39
At Edge of Crowley's Ridge

A gigantic oyster bed millions of years old, literally a graveyard of antiquity that was a teeming mass of live bivalves as big as four inches across, has been lying quietly all these many years on Highway 70, at Forrest City, just east of Forrest City, where some 2,000 motorists daily pass unknowingly over the historic spot.

This place is on the very brim of what was once the Gulf of Mexico that in prehistoric times extended as