Third Eye Found in Head Of Prehistoric Reptile

Gazette 4-23-38

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

Democrat 5-24-38

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 Lorance 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

Gazette 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 explained 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 Forrest City, Arkansas

2-23-39

Paragould Daily pres

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. Lawrence 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 erosial 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 Crow 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 At Edge of Crowley's Ridge

Democrat 2-23-39

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 Crow creek, 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

far north as Cairo, Ill., and since the sea receded, back in the time when man probably hadn't reached even the stone age, untold millions of fossil shells have been lying there, plainly visible from the concrete bridge that spans the creek.

The deposit has just been surveyed by the state-wide WPA project of the state geological survey, with Dr. George G. Branner, state geologist, as director, and some interesting facts have been revealed.

In September, 1938, while on a tour of the South, Dr. Gilbert D. Harris and Mr. and Mrs. E. Lawrence 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).

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 pre-historic 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 from 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, principally the Mississippi and Ohio rivers, carved out the soft coastal plains land and left Crowley's Ridge as an erosial 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's 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 Crow 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 the 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's Ridge.

Interest has recently been stimulated by the work of the State Mineral Survey in St. Francis county. 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 N. Victory street, Little Rock.

Petrified Forest in Clay County

Buried Logs, Now "Turned to Stone," Indicate Presence of Little Known Natural Wonder in Northeastern Arkansas.

Gazette 5-14-39

It is a well known tendency of the human race to look upon things which lie at a great distance as more desirable or more worthy of study than things which are close at hand. Likewise, many persons who have traveled a good bit in the world are far better acquainted with the wonders which lie in far places than they are with those which are to be found, figuratively speaking, in their own dooryards.

Take the petrified forest of Arizona, for instance. There is hardly a boy or girl of grammar school age who has not learned of this natural wonder from textbooks. But not one in a thousand, likely, knows that there is a petrified forest in Arkansas, a petrified forest that is just as old, just as much of a scientific wonder, as the one in Arizona. In fact, the existence of this forest is so little known that there are many people living nearby who have given no thought to its existence, even though an occasional petrified log may lie in their own fields or pastures.

Although the existence of this natural wonder is an established fact, the territory is not to be recommended for sightseers, since with few exceptions, the great stone tree trunks are buried many feet underground and are brought to light only when rains uncover them by washing the surface soil away, or during operations at gravel pits or other excavations. The fact that the petrified forest is a buried one is responsible for the lack of general information about it, although in recent years much has been done to publicize it.

Discovery of the petrified forest has been due largely to efforts of the Harlan brothers, the late H. H. Harlan and Ira W. Harlan of Piggott, who began uncovering the logs several years ago.

Living on a small hill farm near the outskirts of Piggott, "Uncle Hays" Harlan, as he was known, was an amateur naturalist for many years, and he took great interest in all natural phenomena in the hills around his home. Some years passed before he gave much thought to the odd petrified trees that he occasionally ran across. He gradually realized that these logs were no occasional petrified objects, such as one is apt to find nearly anywhere in a region where conditions are favorable for petrification, but that there was an enormous number of them buried under the red Clay county hills. Tracing out the area of the underground stone forest became a hobby with him. With his brother, I. W., who shared his enthusiasm for all natural phenomena, he began to study all records he could obtain of petrified logs that had been found in the area, and of excavating the choicest specimens that he could find, which were close enough to Piggott to be easily transported. The two men excavated more than a dozen choice specimens of the logs, and one of these, a 12-foot specimen of beautiful cream colored stone, was chosen to be mounted in the county courtyard at Piggott, as a monument to the forest. This monument now stands in a concrete base, and bears in its eastern face a marble tablet, with names of citizens who contributed toward the erection of the monument.

The buried trees are found at all depths and though relatively few of them have been uncovered, thus far it is believed that there is an enormous number of them under the ground. The section in which the trees now are known to lie is several miles wide, and perhaps 50 miles in length. All which have been found are in the hills of Crowley's Ridge. So far none of the logs have been found in the lowlands. The soil in which they are found varies, some of them being in red clay, others in a sandy, gravelly mixture that probably is of sedimentary origin. Geologists say that the part of Arkansas from the eastern edge of Ozarks to the Mississippi river once was under water, and that the petrified trees antedate the period when the country was inundated. They are buried under this sand and gravel formation.

Whether the trees actually grew upon the same tracts of land at which they are now found is not known. They may have been washed great distances during some tidal wave or upheaval, only to become waterlogged and sink to the bottom of the sea, there to be covered by the silt of thousands of years. After another upheaval, the land again rose and the logs now "turned to stone" through absorption of minerals in the water, probably were pushed upward. What once had been the bottom of the Gulf, now became low hills. That the logs were petrified before this latter upheaval came is known by the "breaking" of the stone trees, for the logs are all broken into short lengths, the average being four or five feet long. This breaking was due to the strain and stress of the upheaval. The breaks are all clean and smooth, not the rough, splintery breaks that would have occurred had they been broken as wood. The specimens have been identified as a species of hickory, and most of those discovered have been so well preserved that the grain of the wood, the weather cracks, and even the knots can be seen as plainly as though they were newly cut logs.

Unearthing one of the petrified logs in the Clay county area.

The popular phrase, "turning to stone," of course is misleading, since logs do not turn to stone. Not a molecule of the original wood exists in the object in any form. When any object, whether a tree, mollusc, reptile or whatnot, become buried in suitable soil, decay sets in. In the soil are certain minerals, mainly lime and silica, with traces of iron and various other substances, all carried in solution by the moisture or water in the soil. As each atom and molecule of the original object decays and is washed away by the water trickling through it, it is replaced by a molecule of the lime and silica. As more and more of the particles of the original object decay and are gone, their places are taken by the minerals. Finally the day comes when all of the original wood is gone, but lying in its place in the soil is an exact counterpart of the object, so perfect in construction that even microscopic details are reproduced. Thus it will be seen that petrified trees are not the original trees, but stone reproductions of them, carved by the matchless hand of nature.

The color of the petrified articles varies according to the other minerals in the soil. If iron is present, the stones will be colored in various shades of yellow and red. The Clay county objects are all of a light cream color, but the trees in the petrified forest of Arizona are in various shades of brown and red. It will be seen from this that petrified objects only under certain conditions, the soil must contain just the right amount of lime and silica and other conditions must be favorable.

Not only are petrified trees found in the northeastern part of Arkansas, but other objects as well. In the collection of Mr. Harlan are petrified sweet potatoes, twigs and other articles. In the gravel pit one may find many remains of small sea creatures, coral and many other forms of sea life.

Many of the logs have been dragged out of fields where they are found, broken up and used to fill gullies, or built into foundations of some building. In the old cemetery at Piggott many small fragments are found serving as markers at graves. A large log stands at the grave of the late Hays Harlan.

An exhibit containing typical specimens of petrified logs found in northeast Arkansas.