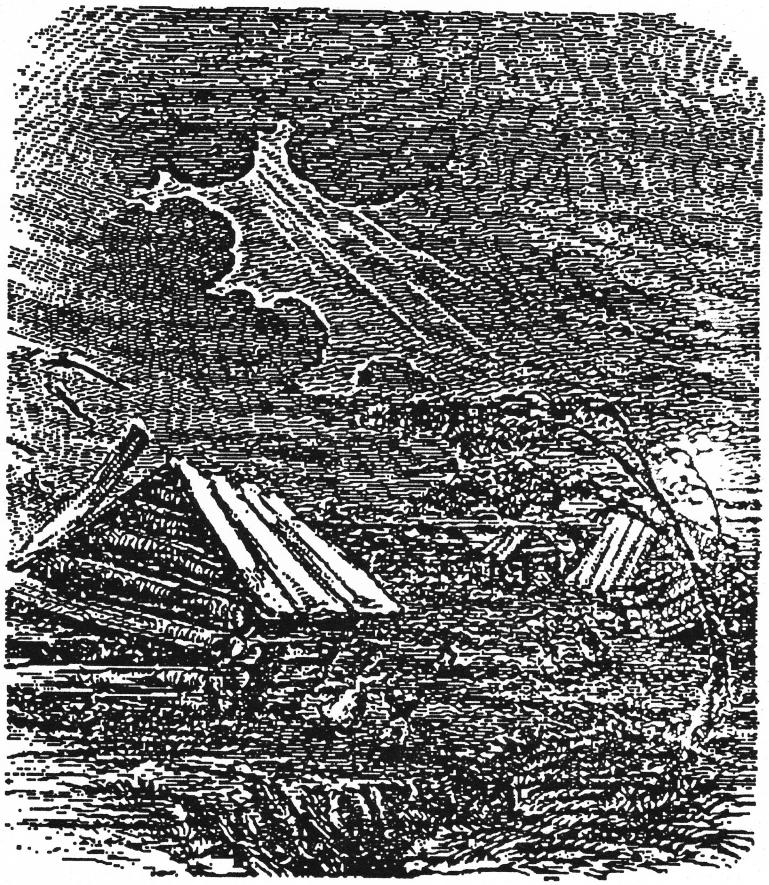
Horror Come Morning

Being, selected eyewitness accounts of the "Annus Mirabilis" and the New Madrid earthquakes of 1811-12



By David L. Riley
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The air was crisp, but not unduly cold for an evening in mid-December. The vapor easily appeared when one breathed out the Western Kentucky night air and the exposed tips of ones' ears tingled as the chill skies held clouds and a hint of coming rain.

Eliza was turning down the lamps in her home and had banked the coals in the fireplace. John earlier had taken his horse across the "barrens" in search of wildlife. Lydia hardly could contain the pride she and her husband felt as they ventured south in their new boat. Matthias pondered the mechanics of transporting his cargo, selling it and returning to his Louisville home.

The year was 1811 and before the next 24 hours were spent, each of these would witness death. They would witness a fury in nature that no one had seen before or since. And they would witness scenes whose curiousness surely would haunt them the rest of their lives.

Thousands of feet beneath the rich loams and clays of the Mississippi valley are flaws in the underlying bedrock. When ancient glaciers carved out what was to become the future riverbed, there was no thought that the layer upon layer of sediments, sands and crushed debris would weigh heavily on these fissures and that from time to time through the millenniums, there would be periods of settling and shifting.

The U.S. Geological Survey has borrowed underground sounding techniques from the oil industry to determine that an ancient and active earthquake rift zone lies roughly between New Madrid, Mo., and Marked Tree, Ark.

But these scientists might as easily have pinned down the boundaries of this often turbulent zone by reading the diaries, letters and accounts of early 19th century resident of the area.

To frontier Methodist preacher Lorenzo Dow, Eliza Bryan wrote in 1816:

"On the 16th of December, 1811, about 2 o'clock a.m., a violent shock of earthquake, accompanied by a very awful noise, resembling loud but distant thunder, but hoarse and vibrating, followed by complete saturation of the atmosphere with sulphurous vapor, causing total darkness. The screams of the inhabitants, the cries of the fowls and beasts of every species, the falling trees, and the roaring of the Mississippi, the current of which was retrograde for a few minutes, owing, as it is supposed, to an eruption in its bed, formed a scene truly horrible.

"There were several shocks in a day, but lighter than those mentioned, until the 23rd of January, 1812, when one occurred as violent as the severest of the former ones, accompanied by the same phenomena.

"From this time on, until the 4th of February the earth was in continual agitation, visibly waving as a gentle sea. On that day, there was another shock, nearly as hard as the preceding ones; the next day four such, and on the 7th, at about 4 o'clock a.m., a concussion took place so much more violent than those preceding it that it is denominated the 'hard shock.'

"The surface of the earth was from time to time by these hard shocks covered to various depths by sand which issued from fissures that were made in great numbers all over this country. Some of these closed up immediately, after they had vomited forth their sand and water. In some places, however, a substance resembling coal or impure stone coal was thrown

"Back from the river large ponds, or lakes, which covered a large part of the country, were nearly dried up. The beds of some of them are elevated several feet above the former banks, producing an alteration from the original state of 10 or 20 feet, and lately it has been discovered that a lake was formed on the opposite side of the Mississippi, in the Indian country, upwards of 100 miles long and from one to six miles wide, of a depth of from 10 to 50 feet."

As alluded to in Mrs. Bryan's letter there were three major shocks in the New Madrid series, the first on December 16, 1811 and the other two on January 23 and Feb. 7, 1812. But as is usual in major earthquakes, there were many intervening shocks. These were less severe, but only by contrast to the three biggest quakes. What was quite unusual about the New Madrid earthquakes was the repetition of major shocks. The recurrence of quakes in a period of months or even years is quite rare.

The New Madrid earthquakes, gigantic disturbances, had a magnitude of 12, as expressed on the primitive Mercalli Intensity Scale of 1 to 12 of that era, meaning that they were the largest, most severe types of earthquakes on record.

The celebrated Richter Scale over which broadcasters lather is a product of this century.

These quakes were so great that they caused major topographic changes over an area of 50,000 square miles, and badly shook a total area of more than 1 million square miles. The earthquakes were felt over two-thirds of the United States. Shaking was recorded in New Orleans, Boston where it stopped clocks, New York, Norfolk, Va., where it set bells ringing, Colorado, Montana, and as far north as Northern Canada. Repeated strong shocks rocked Louisville, fully 200 miles away.

The course of the Mississippi was altered in many sites; swamps were drained; and new lakes were created in Arkansas (Lake Francis) and in Tennessee (Reelfoot Lake).

"Many thing conspired to make the year 1811, the ANNUS MIRABILIS of the West," wrote John Latrobe. "During the earlier months, the waters of many of the great rivers overflowed their banks to a vast extent, and the whole country was in many parts covered from bluff to bluff. Unprecedented sickness followed.

"A spirit of change and recklessness seemed to pervade the very inhabitants of the forest. A countless multitude of squirrels, obeying some great and universal impulse, which none can know but the Spirit that gave them being, left their reckless and gambolling life, and their ancient places of retreat in the North, and were seen pressing forward by tens of thousands in a deep and solid phalanx to the South.

"No obstacles seemed to check their extraordinary and concerted movement. The word had been given them to go forth and they obeyed it, though multitudes perished in the broad Ohio which lay in their path. The splendid comet of that year long continued to shed its twilight over the forests, and as the autumn drew to a close, the whole valley of the Mississippi, from the Missouri to the Gulf, was shaken to its center by continued earthquakes."

Louisville naturalist Jared Brooks wrote in his diary that temperature were just above freezing, the sky was cloudy and a light mist was falling.

But Brooks was more than a weather watcher, for once the earthquakes began, he had the presence of mind to set up crude pendulums to record as many tremors as possible. There were so many, more than 1,800 in fact, that he devised a six-point scale into which he grouped these disturbances.

On this spectrum, No. 1-rated tremors were the most severe. These were capable of destroying a town if they continued long. During the most severe shocks, buildings rocked and ground against one another, walls split and chimneys, parapet and gable roofs collapsed.

Sixth-rated shocks, on the other hand, were hardly perceptible.

But fortunately, only 18 were of the first or second-rated power. Had more of them been violent or had these 18 lasted longer, even the young city of Louisville might well have been destroyed.

Letters, accounts and diaries of the time are full of interesting detail, and while we now know that the facts in many cases were greatly exaggerated, the recurrence of details is both facinating and telling.

The ground did rise and fall like swells of the sea, passed across the surface tilting trees, and breaking up the soil in deep cracks.

Entire forests moved with branches interlocked, like fields of grain before the wind.

The rhythmic motion of the earth is well shown by the parallel lines of cypress trees now growing on the low crests of the many rolls in the

Reelfoot Lake region. An airplane view of the cypress trees brings to life again the roll of the earth as it occurred a century and a half ago.

Whole islands in the river's channel — some as large as 200 acres — disappeared and new islands appeared where none existed before.

The river did in isolated stretches reverse its course.

Visitor John Haywood recalled years later that ominous weather preceeded the quakes.

"The (day) before the first earthquake was darkened from morning to night by thick fog, and diverse persons perceived a sulphurous scent. The wind ceased, and there was a dead calm without the least breath of air on the day of the earthquake. The like calm preceded all the shocks.

While those like Haywood remembered the peculiar weather that preceded the earthquake, others recollected the strange behavior of horses, cattle, and even wild animals. It seemed somehow that they were able to detect earthquakes before men could.

A remarkable example of these phenomenon comes to us from none other than John James Audubon, the famous ornithologist. While riding through the Kentucky "Barrens," he noticed a sudden and strange darkness rising from the western horizon.

Thinking that a thunderstorm was about the break, he spurred his horse toward a nearby shelter.

But suddenly his mount stopped and refused to go any further.

"He placed one foot after another on the ground, with as much precaution as if walking on a smooth sheet of ice. I thought he had suddenly foundered, and speaking to him, was at the point of dismounting and leading him, when he all of a sudden fell a-groaning piteously, hung his head, spread out his four legs, as if to save himself from falling, and stood stock still, continuing to groan.

"I thought my horse was about to die, and would have sprung from his back had a minute more elapsed, but at that instant all the shrubs and trees began to move from their very roots, the ground rose and fell in successive furrows, like the ruffled waters of a lake, and I became bewildered in my ideas, as I too plainly discovered that all this awful commotion in nature was the result of an earthquake."

Scientists suggest that animals can detect the "P" wave, or the first wave from the earthquake, whereas the rider felt the larger amplitude surface waves which would have arrived one or two minutes later.

Residents in the thousands of acres most strongly affected by the quakes struggled with falling chimneys, dangerously weakened houses and fires caused in part by the damaged chimneys.

When they fled from their houses into the blackened streets, the earthquake sent undulating waves along the ground, knocking everyone to their hands and knees.

From New Madrid resident George Ruddell, we learn that many who endured the first severe shocks prayed that relief would come at dawn. He wrote that it seemed at first their prayers would be answered, for the earth quieted for a time at about 6:30 a.m. He learned that during this interlude, one resident had ventured into the streets to see how his neighbors had managed. But before he had a chance to inspect the damage, an especially hard shock knocked him to the ground.

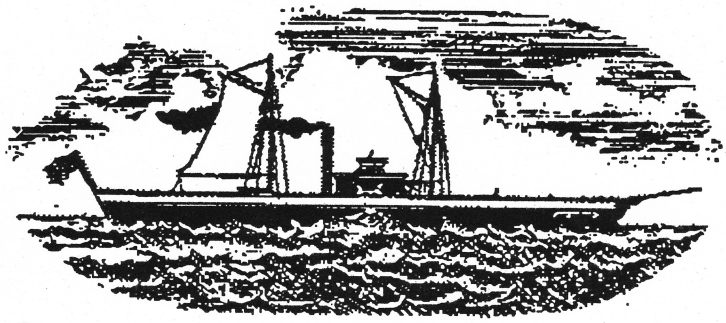
By 7 a.m., the situation had become serious indeed, for now the earth began rolling from west to east in four-foot high horizontal waves. Occasionally, a burst would spew mud, water and sand high into the air. Only with much difficulty did he manage to return to his family. He was with them when at 7:15 a.m., the hardest blow of all struck.

According to some reports, in the daylight hours during the time of the worst of the earth tremors, it became almost dark because of vapors and escaping gases from the great gaps in the land. At times it seemed people would suffocate due to sulphur fumes.

After the violent quake of January 1812, the frightened cry arose of "sauze ave pent" or "save who can" and most of the families fled the country. Not so lucky of having the option of fleeing were those who were waterborne at the time and shared the sailors curse of having no place to run.

Nicholas and Lydia Latrobe Roosevelt were no exceptions on the steamboat NEW ORLEANS making the maiden voyage of any steamboat on the Mississippi.

"The first shock that was observed was felt on board the NEW ORLEANS while she lay at anchor near Louisville after passing the Falls of the Ohio.



"The effect was as though the vessel had been in motion and had suddenly grounded. The cable shook and trembled, and many on board experienced for the moment a nausea resembling sea sickness.

"It was a little while before they could realize the presence of the dread visitor. It was wholly unexpected. The shocks succeeded each other during the night. When morning came, the voyage was resumed; and while under way, the jar of the machinery, the monotonous beating of the wheels and the steady progress of the vessel prevented the disturbance from being noticed.

"On some of these occasions, squatters came on board with tales of their experiences and these terror-stricken people begged to be taken on board. Others, dreading the steamboat even more than the earthquake, hid themselves as she approached.

"To receive the former was impossible. The would-be refugees had no homes to go to; and ample as was the supply of provisions was, it would have been altogether insufficient for any large increase of passengers: and as to obtaining provisions on the way, the NEW ORLEANS might as well have been on the open sea.

"Painful as it was, there was no choice but to turn a deaf ear to the cries of the terrified inhabitants of the doomed town.

"One of the most uncomfortable incident of the voyage was the confusion of the pilot, who became alarmed, and declared that he was lost; so great had been the changes in the channel caused by the earthquake. Where he had expected to find deep water, roots and stumps projected above the surface. Tall trees that had been guides had disappeared. Islands had changed their shapes. Cut-offs had been made through what was forest land when he saw it last.

"Still, there was no choice but to keep on. There was no place to stop. There was no possibility of turning back.

"In the first part of the voyage when the steamboat "rounded to" at night, she was made fast to the river bank: but when it was seen that trees would occasionally topple and fall over, as the ground beneath them was shaken or gave way, it was thought safer to stop at the foot of an island, which might serve as a breakwater, taking care the trees were far enough from the boat to prevent potential damage.

"Once, however, when such a fastening had been made ... a new experience was had. No shock had been felt during the day, and Mrs. Roosevelt anticipated a quiet rest.

"In this, however, she was disappointed. All night long she was disturbed by the jar and noise produced by hard object grating against the planking outside the boat.

"At times, severe blows were struck that caused the vessel to tremble through its entire length. Then there would follow a continuous scratching mingled with the gurgling sound of water. Driftwood had

caused sound of the same sort before, and it was thought that driftwood was again busy in producing them.

"With morning, however, came the true explanation. The island had disappeared; and it was the disintegrated fragments sweeping down the river that had stuck the vessel from time to time and caused the noises that Mrs. Roosevelt had been disturbed by.

"At first, it was supposed, that the NEW ORLEANS had been borne along by the current; but the pilot pointed to landmarks on the banks which proved that it was the island that had disappeared while the steamboat had kept its place.

During these "hard shakes," Kentuckian Matthias M. Speed, captain of a flatboat convoy, found himself a few miles above New Madrid.

He wrote that on December 16, the earthquake struck during the early morning hours. Speed said that he awoke at 3 a.m. to "booming cannonades." To make things worse, the small island to which his boats had been anchored began to disintegrate.

To avoid being pulled under by the crumbling sand bar, he ordered his men to cast off and to keep to the middle of the river. There his boat was tossed first one way and then another "like a wooden chip in a mill race."

Then as they lurched into sight of New Madrid, they faced a new challenge. There, extending across the entire Mississippi spilled a six-foot high waterfall.

This to him was unbelievable. None, of course, was listed on his map, yet there it was, pulling them ever closer to its cascading waters. Sucked over its edge, they were nearly swamped.

By frantic efforts, though, they managed to keep afloat until they put in at the now shattered village of New Madrid. But shaken by his harrowing experience, Speed sold his cargo for a small fraction of its value at New Madrid and returned with his men to Kentucky.

Riverboatman James McBride wrote to his aunt in April of 1812 accounts mirroring those of Speed.

"Soon after entering the Mississippi River, we began to discover the effects of the Earthquake (in) the region of which we were now approaching.

"Above New Madrid on the west side of the river is a grove of cotton wood and willow trees, two or three miles long. These were all bent up stream and stripped of their leaves and branches in a singular manner. It is said that at the time of the most violent shock, the river at this place for some time ran up stream with great velocity, and from the appearance I have no doubt of the fact, as I know of nothing else that could have

produced the appearance here exhibited. We were now experiencing considerable shocks every few hours.

"I made every effort to land on the other shore but was unable. At dark, I made a willow island in the river and fastened to the willows, where we remained all night in a very exposed situation. The island was all overflowed, but barely sufficient where we lay to float our boat which drew somewhat over three feet of water. The river was falling and myself and hands were obliged frequently during the night to jump overboard into the water, cold as it was, to push off the boat and prevent her getting fast aground."

Come morning, McBride cast off and floated to the former village of Little Prairie while he awaited his companion flatboatman helping carry the 350 barrels of flour, whiskey and pork they were taking to New Orleans.

"On landing, we soon discovered that the place where we were moored had been part of the town, (and was) now the bed of the Mississippi river.

"The place where we made fast our boat was a burying ground, part had sunk into the river and coffins were exposed along the bank. Then tenants had been Roman Catholics, as the cross was erected at the head of each grave.

"Although it rained considerably after securing our boat, I wrapped myself in my great coat and went on shore to see what discoveries I could make. Of about a dozen houses and cabbins which I saw, not one was standing. All was either entirely prostrated or nearly overturned, and wrecked in a miserable manner.

"The surface of the ground was cracked in almost every direction and stood like yawning gulphs, so wide that I could scarcely leap over them. But what particularly attracted my attention were circular holes in the earth from five or six to 30 feet in diameter, the depth corresponding with the diameter so as to be about half as deep as wide, and surround(ed) with a circle of sand two or three feet deep and a black substance like stone coal but lighter, probably carbonized wood. I took some pieces of them to the boat on putting them on the fire. I found they would burn, at the same time producing a strong and disagreeable sulphurous smell.

"These holes I presume must have been produced by a strong current of air issuing from the bowels of the earth throwing up sand and water, and this black substance, which was perhaps wood long imbedded in the earth, prostrating the trees, and every thing else where they happened and producing the most horrible disorder.

"I observed in several instances where small explosions had occurred under large trees, that the trunk of the tree was split up 10 or 12 feet and separated two or three feet wide at the ground and thus remained standing.

"The day was dark and gloomy with light, I heard and felt from time to time the rumbling noise of these explosions, all nature around me had the most melancholy appearance. A sudden dread came over me all at once and I returned to the boat.

"I lay at Little Prairie until the afternoon of the next day during which time we experienced eight or 10 shocks, some of them severe, so as to shake from their places loose articles in the boat. Each shock continued about two minutes and was preceded by a rumbling noise like distant thunder or the discharge of a cannon at a great distance.

"We experienced slight shocks at intervals for the distance of 100 miles above and below Little Prairie. The shores of the river in the region presents a most melancholy spectacle, the banks cracked and fractured, trees broken off and fractured, and in many places acres of ground sunk down so that the tops of the trees just appeared above the surface of the water.

"All natured appeared in ruins, and seemed to mourn in solitude over her melancholy fate."

Several accounts assert that all along the river other boatmen were shaken awake by the first booming report of the quakes.

Yet these shocks passed so quickly that sometimes crewmen did not realize that they were caught in an earthquake or thought that collapsing river banks had roiled the Mississippi.

But when the second quake struck at 3 a.m., there was no longer any doubt about what was happening. This time the Mississippi seemed to take a deep breath and pull back from the shallow waters on either shore. Some boats were stranded on newly-exposed mud banks, while other bobbed atop an incredible wave that rose as much as 30 feet above river level. A few moments later, the pent-up waters rolled upstream, spreading out for as much as three or four miles inland before coming to rest.

EPILOGUE

There are various reasons that the New Madrid earthquake — by all evidence the most severe in North America — never achieved the notoriety of other quakes.

One reason there were so few deaths in the Mississippi Valley earthquake was its sparce settlement.

Louisville and St. Louis were the nearest large towns, and even they were too far away to be seriously threatened.

We all know about the 1906 San Francisco earthquake because the "Bay City" was a thriving commercial and cultural center of some half-million citizens at the turn of the century.

New Madrid, on the other hand, was a tiny frontier village in 1811, almost entirely isolated from centers of population on America's eastern seaboard.

In fact, had it not been for the earthquake itself and a passing reference to the river town in Samuel Clemen's Life on the Mississippi, few people would know of New Madrid today.

Another life-saving factor was the log cabin. These structures absorbed all but the most severe earthquakes. Even though they, too, eventually collapsed, apparently no one was trapped and killed inside one.

But regardless how durable the log cabins, virtually all were destroyed in the region of most severe damage in southeast Missouri.

Here it was years before life returned to normal. Minor shocks continued throughout the region, forcing residents to live in makeshift huts for some 18 months following the major shocks.

In spite of severe damage to property and to the land itself between Fort Massac, on the Lower Ohio, and a point about 30 miles below present-day Caruthersville, Mo., the New Madrid earthquake soon faded from the headlines. The War of 1812 attracted immediate interest, and, during the halcyon days of the 19th century, few paid any attention to stories of a disaster that had occurred in and around an obscure frontier village.

Even near New Madrid, successive waves of settlers ignored stories which pioneers retold of their experiences during the hard shocks. Unfortunately, by the time scientists and historians focused their attention on this subject in 1900, most of the eye-witnesses had died.

So great was the land and property damage in the New Madrid quake, that the United State passed the first national disaster relief act in 1815. It provided landowners of devastated acreage with equal amounts of land elsewhere in the territory.

Part of the rationale of the act was the evidence of land sharks descending on the panicked victims and buying entire farms for the price of a mule or a horse, so anxious were people to get away. Those who remained were no better off, for they were exploited by rustlers who stole their cattle.

Even worse, it was several years before they were able to cultivate their torn and fissured farms on any large scale because in some areas the

land was so badly fissured that cracks could not be crossed on horseback. An estimated 150,000 acres of timberland were destroyed, most by flooding and subsidence. Acres of prairie were destroyed by subsidence that turned farmland into swamps or by "sand blows" that covered cultivated land with sand and mud.

Another aspect of pioneer life affected by the earthquake predictably was religion.

Peter Cartwright, the frontier Methodist preacher, was fond of telling the story of a pioneer gentleman who forgot all about family responsibility during the earthquakes. His story concerned a certain Valentine and Tabitha Cook, a couple who lived near Russellville.

They had been asleep when the earthquake hit their cabin, but in a moment, Cartwright said, Valentine leaped up and lurched toward the door. The hysterical settler stumbled outdoors with nothing on but his night clothes. Scrambling across a nearby field, he cried out, "My Lord is coming! My Lord is coming!"

Not wanting to be left behind, his wife followed him pleading, "Oh, Mr. Cook, don't leave me! Don't leave me!" "Oh, Tabby," he replied, "My Lord is coming. I can't wait for you, Tabby."

Rev. James B. Finley was one of many preachers who found conversions easier in 1812.

Although he said there had been signs of a revival before the earthquakes — and this was a time of monumental frontier revivals — conversions swelled after people had been frightened by the shocks.

Preachers must have had similar experiences all across the lower Mississippi Valley in 1812 and 1813, for church membership leaped upward in those years for this and a myriad other reasons.

Walter Brownlow Posey shows that membership in the Western Conference of the Methodist Church jumped some 50 percent in 1812.

In other regions of the country, Methodist gains were at the more modest rate of about 10 percent. It would seem then, that the earthquake did indeed exert at least a temporary influence on church attendance.

With the 1811 earthquake's many facets and widespread notoriety, what was Christian County's experiences?

Regretably, that is part of the county's history that has eluded serious and casual historians alike.

Not one reference is made in the county court's record books and no reliable diaries have surfaced from that period. As accounts exist of earthquake experiences in Todd County and — if you were to put stock in Rev. Cartwright's story of the Russellville couple — the county certainly was in line for its share of rocking and rolling.

But like New Madrid, Hopkinsville then was a frontier community, having only been established 14 years earlier. It likely took the harsh frontier life in stride and probably would neither have sought, nor would have accepted disaster loans, grief counseling groups or seditives.

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