Summary of Personal Accounts

Description: Author: Info Categories:	<u>1991 Interview with man who was 17 years old and living in</u> <u>Elsinore, Utah, in 1921</u> Christensen, R. Gordon A, B, E, P
Description:	Excerpt from a town history (Elsinore, Utah)
Author:	Jacobson, Gwendolyn; Elsinore Literary Club
Info Categories:	A, B, E, P
Description:	University of Utah professor's account of October 1, 1921 earthquake
Author:	Pack, Frederick J.
Info Categories:	E, P

Information Categories

A -- Aid:

provide medical services, shelter, donations, loans, advice, encouragement, implement safety measures

B -- Building Damage:

structure itself plus windows and chimneys (typically damage visible from outside the building)

E -- Earthquake

Description:

where, when, duration, direction, sound, motion, number and timing of aftershocks

G -- Geologic Effects:

changes at the Earth's surface, fault scarps, rockfalls, landslides, ground cracks, ground subsidence, sand boils, water spouts; effects on springs, lakes, wells

H -- Humor:

I -- Impact:

changes in daily routine; rumors; influx of reporters, politicians, cost in dollars

L -- Lifelines:

effects on transportation: roads, bridges, railroads, airports effects on communications: telephone, telegraph effects on power, gas, water, and sewer lines effects on dams

N -- Nonstructural Effects:

effects on plaster, furnishings (typically damage or rearrangement of furnishings visible inside a building)

P -- People:

effects on and responses to, during and after; deaths, injuries, near misses

R -- Recovery:

clean up, rebuild

S -- Scientific:

explanation of the day

Excerpts from: Interview with R. Gordon Christensen, age 89 Salt Lake City, Utah; August 29, 1991

Interviewed by: Edith O'Brien, University of Utah Seismograph Stations Mr. Christensen was born in Elsinore, Utah (Sevier County in south-central area of state) in 1904 and lived there until 1955 when he moved to Salt Lake City. Elsinore was significantly shaken by earthquakes in 1901, 1910, and 1921.

Mr. Christensen:

The first experience that I had with earthquakes myself was when I noticed what effect the earthquakes had on animals. I believe the first one I noticed was when I was out in the yard. Across the road there was a pasture with horses. All of a sudden the horses would raise their heads and seemed to be alarmed at something. I hadn't noticed anything wrong. They seemed to be running around in circles and in all directions, and by that time I could feel the earthquake, but it was quite evident that the horses could feel it or detect it some way a few seconds before I did.

Another similar experience was with a dog. I was in the yard playing with the dog and suddenly it became very alert. Its ears stood up and the hair stood up on its back, and it jumped up on a wood fence. By this time, I began to feel the earth shake.

Another time, I was milking a cow, and sitting there with the milk barrel between my knees, and all of a sudden, I could tell the cow was becoming kind of rigid and funny. She picked the bucket up and sent the milk going, and about that time the earthquake struck. That was just the experiences I have had with animals.

[In response to interviewer asking if these experiences occurred in the 1921 earthquake series, Mr Christensen said, "These were at different times, but in the same area." It is possible that these experiences were during the 1910 Elsinore earthquake series.]

Mr. Christensen:

And later on, this was about 1921, in fact from this time until about 1924, I wasn't different from other young men, and was inclined to stay in bed in the mornings(as long as possible. But this particular morning, my dad was a little aggravated about my not getting up. I was sleeping in the screened porch that had been remodeled and right next to a brick wall. This morning he stepped into the door and was about to call me again, when an earthquake struck. I sat up in bed and the dust came out of the wall and really frightened me. I expected the wall to fall. My dad said, 'Now will you get up?'

Mr. Christensen:

And another one about this time, we had an opera house in Elsinore. It was a large frame structure with an end of the building, where the stage was, it had been built up high to accommodate the scenery being pulled up high to keep from rolling or bending. It was kind of a creepy building, and the roof was made of tin, covered. We were having a town dance one night, and everybody was having a good time, when, all of a sudden, the tin roof started to swing, crackling and creaking. The tin roof made such an awful noise that everybody became panicky and ran outside. This was an earthquake. Everyone knew because we had experienced one several years before.

So we were all standing outside, the orchestra included, discussing earthquakes, and everyone was scared. One of my older friends started out to one side standing there and making some kind of a foolish statement about - 'Let joy be unconfined. Go back in and have a good time.' So we all decided to go back in. It was quite an exciting time, because it was quite a severe earthquake.

Interviewer:

Did the earthquake last a long time? Was the shaking still going on while you were running outside?

Mr. Christensen:

It was shaking until we pretty well got outside. The main part of the shock must have lasted 30 seconds or so.

This building (Opera House) was right across the street from a building that caved in. This same earthquake - we had a new school building which hadn't been built more than two or three years, I guess. And we had an older building that had been built in 1898 - and to this day, the old building is still standing there and has been renovated into town office and so on, but the new building is gone. This earthquake didn't destroy it, but it did damage some ornamental structure that was on the corner of the building, big cement blocks. They were shaken off and fell into the schoolyard, and it just happened that school wasn't in session at the time, or there could have been some casualties. I had a picture of the school building along with this picture that I showed you (building on Main St. that collapsed), but I have been unable to find it.

Interviewer:

What happened in your home during the earthquakes?

Mr. Christensen:

I was living with my folks at the time of most of these earthquakes. And their home was a brick home. The oldest part of it was the center, and it was two stories with a brick chimney coming up through it. Dad had to repair the chimney a time or two, and he did all that himself. He had a support barrier on either side of the chimney and then scrap iron going around it to hold it. The earthquake all but took the chimney. It cracked it real bad, and dad had to take it down and rebuild it from the roof up and add the supports.

Interviewer:

How about things on shelves in the house?

Mr. Christensen:

Oh yes, I remember mother had to rearrange her cupboards and china closet. I don't recall whether there was any breakage to amount to anything or not.

Interviewer:

But your family never felt that they needed to camp out in the yard for a night or two?

Mr. Christensen:

No, I don't recall that we ever did that. But I do remember a lot of the younger people didn't mind going out and sleeping on the lawn, but I don't remember whether it was because of the earthquakes, or they just wanted to sleep outside. I spent many of my summer nights sleeping outside.

Interviewer:

The picture that you made and your daughter gave me, can you tell me about that building? What was it and was it currently being used?

Mr. Christensen:

Well, it was a building with guite a history. As far as I can remember back, until 1918 it was a saloon, a regular old western saloon. And, of course, when I grew up I was expected to walk on the other side of the street from the saloon. And I recall the story about things in the saloon that happened, fights and things that went on between different factions. We had a river that ran through the valley there, and on the one side of the river were farms and a few people and the area was called Brooklyn, and there was a faction over there that didn't like the people on our side. And, once in a while, it would come to a head and that would usually happen in the saloon. I recall one fight that they had in this building, and they had to haul two or three of the combatants out and give them some doctoring, but no one was ever killed that I can remember. But they did have some serious things happen there. Later prohibition came along, and that did away with the saloons, and from that time on it was more or less vacant, and then it was taken over by Nelson-Ricks Creamery. It was just used as a place where they would collect milk and send it to their creamery in Salt Lake by railroad. But then Nelson-Ricks established a regular cheese factory there. But it was vacant at the time of the earthquake.

Interviewer:

And you don't know of anyone getting hurt in Elsinore because of an earthquake?

Mr. Christensen:

No, I don't recall of any real casualties. That was about the only building that was destroyed to any extent.

But the extent of the excitement and, as you call it, "stress" that the earthquakes had on the population of Elsinore was demonstrated in the fact that the town fathers at that time decided it would be a good idea to have someone from the colleges in the state come down and give the people a lecture of some kind to explain earthquakes and what to do, and what not to do, in case another earthquake struck. And so the professor from the University of Utah came down, Professor Pack I think his name was. There was a congregation assembled out in front of the church. Dr. Pack sat down on the steps and delivered the lecture about earthquakes which seemed to quiet the nerves of all of the people.

But there was one family he didn't do a complete job on. That was a family who was one of our very best friends in Elsinore, both of my parents and myself, Charlie Porter who had a drugstore. Mrs. Porter was quite an excitable woman, and when one of these

earthquakes happened, she told her husband she was not going to live in this "damned" town any longer.

And it worked out just that way. They sold their business and he moved to Salt Lake and became affiliated with Sweet Candy Company, and later moved to Grand Junction, Colorado. I guess his children are still there in that area, but they left Elsinore, also, because of the earthquakes.

Interviewer:

Earthquakes were really happening repeatedly over a period of time?

Mr. Christensen:

Oh, yes. It wasn't just one. We just kept having them one after another. Some were hardly detectable, and some were quite severe. I imagine most of the things I have told you about happened when I was about 17 to 21 or 22.

Interviewer:

Do you remember anything in any of the earthquakes about hearing a sound?

Mr. Christensen:

Oh yes. I can't say what causes this sound. It is only my personal opinion, but it kind of depends on where you are at, and whether the noise actually comes from the earth itself, or whether it comes from surrounding buildings and places that might make a noise in of themselves. But you see, I seem to recall that there was always a sort of a rumble or a deep-down low pitched sound. When we were in the amusement hall or the opera house dancing, all you could hear was the creaking of the building and the roof, but if you were outside like I was in the instance of the animals is seemed like there was always a kind of a deep rumble, and I imagine that it was, maybe, coming from the earth.

Interviewer:

Do you have any idea whether you heard the sound or rumble before you felt the ground move?

Mr. Christensen:

No, I don't know if I can state this with any accuracy, but it seemed like the sound came right along with the shake. It would last some of them seemed like the main shock would last only two or three seconds, and then it would gradually die down to a very slight shivering until you couldn't feel it.

Excerpt from: Jacobson, Gwendolyn, editor; Memories of "Little Denmark" ; p. 21-23. Elsinore Literary Club assisted by Daughters of Utah Pioneers, Camp Belnap, Elsinore, Utah. printed by The Richfield Reaper; Richfield, Utah; no date listed Submitted by: R. Gordon Christensen and his daughter Mrs. Rosalyn Norris in 1991 Salt Lake City, Utah

As the autumn of 1921 came along, nature handed me a terrific jolt. A series of earthquakes hit here in the latter part of September and the first of October, causing a great deal of damage. The quakes left nearly all homes with cracked chimneys and some with caved in walls. There was a feeling of panic among the people and they sought shelter in the homes where danger was least likely. Here beds were made wherever there was available space for them. The earthquakes gave warning at times with an unearthly subterranean rumbling, as everything movable and immovable was set in motion. Houses careened on their foundations, trees bowed, big boulders rolled down the mountainsides, cracks appeared in the earth, and dust was thick in the air from damaged buildings and falling chimneys.

The greatest damage was done to the new brick schoolhouse. Cement coping around the top of the building was torn loose and tons of cement and brick were thrown to the ground. Had it occurred during school hours when children were playing outside, it could have caused many deaths. Luckily it happened around seven o'clock in the morning. School was closed for three weeks for repairs on both buildings. The neighboring town of Monroe came in for its share of damage too, and the hot springs there vomited blood-red water, caused by the disturbance of iron oxide. The quake was felt to a lesser extent from Salina to Marysvale.

Dr. Fred J. Pack from the University of Utah, who came here at the time to observe the quakes, talked to the townsfolk on the steps of the church. They refused to go inside for fear of another quake. He explained in his talk that the cause of the earthquakes was the slipping of the earth's crust on the Elsinore fault, one of the greatest faults known to geology. The slip was no more than a quarter inch. When the next quake in the series came, the children were sent home from school by the principal because of anxiety for their safety. However, neither this one nor any of the numerous small tremors felt since then have been of any serious consequence.

Excerpt from: Pack, Frederick J., 1921, "The Elsinore Earthquakes in Central Utah, September 29 and October 1, 1921, "<u>Bulletin of Seismological Society of America</u>, Vol. XI Nos. 3 and 4, September-December 1921; pp.159-161

The writer arrived in the town of Elsinore twenty-four hours after the second earthquake. The people were everywhere in a state of high excitement. Most of them were living out of doors and were in continual dread of probable recurrences. Among all of the people there was but one subject of conversation. That evening at the hotel, however, the guests seemed to have themselves pretty well in hand, and, in consequence, next morning the writer was greatly surprised to learn that during the night they had become apprehensive and taken up quarters out in the open. The writer had the hotel entirely to himself.

On the morning of October 1st, at 8:32, another very strong shock was experienced. The writer at the time was standing on a lawn in front of a two-story brick residence and across the street from a line of store buildings. For purposes of studying the effects of the disturbance he could not have had a more desirable position even if it had been selected with full knowledge of what was to come.

The shock arrived with absolutely no forewarning and was as sharp as the blow of a giant hammer. There were no antecedent noises or rumblings, and the instant the effects of the single blow had passed, nature was as quiet and serene as if nothing had happened. The duration of the impact, therefore, can be measured only in terms of a small fraction of a second. Thus, the outstanding feature of this particular disturbance is the extreme suddenness with which it arrived and the short time it lasted. The blow was as quick and as short as the detonation of a cannon at a gunner's side. In fact the effect when standing in the open was not altogether unlike that experienced when a nearby field piece is discharged. The writer felt as if he had been struck by a sudden blow. There were no perceptible noises, except those occasioned by the resultant damage.

The effect of the blow in shaking trees, buildings, and other objects had almost entirely passed at the close of one second. During this brief period all moveable objects were in a state of violent agitation. The writer directed his attention first of all to some nearby trees, then to the residence not more than thirty feet away, and finally to the line of buildings across the street. The trees were shaken as violently as a school boy shakes a limb when stealing his neighbor's fruit.

The effect upon the nearby brick buildings was intensely interesting. The motion of the various walls were not synchronous in the same direction, but rather in opposite directions, in and out, as if the building were inflated and deflated in quick succession. While, of course, the extent of the movement was not great, yet it was sufficient to be easily noticeable, and probably reached a maximum of two to four inches. Furthermore, every brick appeared to be loosened from contiguous ones. Until these phenomena were actually observed the writer did not believe that a building could be subjected to

such violent disturbance and remain intact. The entire structure looked as if it would tumble into a heap at any instant, and yet it suffered nothing more than the loss of some plaster and a chimney or two. The close proximity of the writer to this building was of great advantage in studying it, for when he directed his attention to others across the street, none of the details of the movement could be seen.

The noise arising from creaking houses and falling chimneys came in from every part of the town, and sounded not unlike the clattering of many horses' feet on a wooden floor. Instantly the cries of hysterical women and frightened children followed, and simultaneously they rushed from their homes out into the streets. The utter helplessness of people during earthquake disturbances is perhaps not equaled at the time of any other disaster, for even at times of floods or wreckage at sea there is usually some hope for escape, but with earthquakes no one can stay their coming or foretell the time of their arrival. This condition was brought home to the writer by the manner in which these people wandered from place to place in abject fear of possible recurrences. Then again, on such occasions the majority of people lose their self-control and rush about without thought or judgment.

The earthquake arrived at a time when the country at large was very dry. The dust arising from the shock was fully as dense as that occasioned by a sudden wind storm. About a hundred yards from where the writer stood a store front was projected violently into the street, so that in that particular direction vision was completely obscured for fully a half minute.

Measured in terms of the Rossi-Forel scale, this disturbance had an estimated intensity of VIII or just about the same as the one of two days earlier. The former disturbance, however, wrought considerably more damage, but this is probably explained by the fact that it lasted longer, rather than that it was actually more violent.