

EARTHQUAKES IN TENNESSEE AND NEARBY SECTIONS OF NEIGHBORING STATES — 1926-1950

BERLEN C. MONEYMAKER

Tennessee Valley Authority, Knoxville, Tennessee

INTRODUCTION

The numerous earthquakes which are known to have affected Tennessee and nearby sections of neighboring states from 1699 to 1925, inclusive, have been treated in three previous papers by the writer.¹ The present paper presents accounts of the earthquakes which affected the region from 1926 to 1950, inclusive. These several earthquakes are arranged in a chronological sequence on basis of local dates and times given in the source material.

In the following accounts, the intensity of each earthquake is indicated by a Roman numeral at the end of the caption line. As in the previous papers, the intensities are expressed in terms of the Wood-Neumann scale, on which the maximum intensity is XII. The sources of the information included are indicated at the end of each account. Newspaper references are given in full, but the more scientific sources of information are indicated by Arabic numerals which refer to the publications listed at the end of the paper. In preparing the summaries of earthquakes which occurred subsequent to 1933, the writer has drawn freely from his own file of seismic data. This file is arranged in a chronological order and includes, in addition to clippings and other published material, a card file, letters, questionnaire data, brief reports by various observers, and data collected in the course of the field investigation of individual earthquakes.

THE EARTHQUAKES

1926, *April 27, 8:16 p.m., Mississippi Valley (III)*

A light earthquake attended by a roaring noise was felt and heard by several persons at Kenton, Obion County, Tennessee. Windows rattled and houses swayed. (2, 12)

1926, *July 8, 4:50 a.m., southern Appalachians (VII)*

A very sharp local earthquake damaged buildings and alarmed people in the southern part of Mitchell County, North Carolina. The damage included the throwing down of a chimney and the cracking of several other chimneys; the cracking of the underpinning and foundations of houses; the movement of houses on their foundations; the breaking of water pipes;

1. See *The Journal of the Tennessee Academy of Science*, Volume 29, No. 3, July 1954, pages 224-233; Volume 30, No. 3, July 1955, pages 222-233; and Volume 32, No. 2, April 1957, pages 91-105.

and the breaking of glassware thrown from shelves. Other reported effects of the disturbance include the cracking of the ground, the abrupt swaying and rattling of houses, and the shaking of the dew from the trees. The area in which damage occurred was about half a mile long and 900 feet wide, but the shock was felt at least six miles away. (12)

1926, October 27, 10:22 and 10:25 a.m., *Mississippi Valley (IV)*

Two earth tremors at Poplar Bluff, Missouri, shook buildings, rattled windows, and caused pictures to swing on walls. In the business section, people ran into the streets. Several shocks were reported by the press. (2, 6, 11, 12)

1926, December 13, 5:03 p.m., *Mississippi Valley (IV)*

Buildings at Parma, Missouri were "jarred" by one shock. (2, 6, 12)

1926, December 17, —, *Mississippi Valley (IV)*

Two shocks, about a minute apart, at Tiptonville, Tennessee. Buildings rocked abruptly, frightening a few people. (2, 6, 12)

1927, January 31, 7:30 p.m., *Mississippi Valley (IV)*

Sharp tremors lasting about 30 seconds were felt at Jackson, Missouri. Furniture reportedly was moved. (6, 12)

1927, February 3, 2:00 a.m., *Mississippi Valley (IV)*

Earthquake shocks of sufficient intensity to rattle dishes and windows were felt at Poplar Bluff, Missouri. (2, 6, 11, 12)

1927, April 18, 4:30 a.m., *Mississippi Valley (IV)*

A shock at Ridgley, Lake County, Tennessee, followed at 6:30 a.m. by two additional shocks in rapid succession. (2, 6, 11, 12)

1927, May 7, 2:28 a.m., *Mississippi Valley (VII)*

A strong earthquake, centered near New Madrid, Missouri, followed a disastrous flood on the Mississippi River. It affected an area of about 130,000 square miles in Missouri, Arkansas, Tennessee, Mississippi, Alabama, Kentucky, and Illinois. In Tennessee, the earthquake was strongly felt over an extensive area. Two shocks, in rapid succession, were felt at Memphis, where many were awakened by the rapid rocking motion; surface and subterranean sounds were heard. At Millington, the shocks rocked houses and disturbed furniture and were followed by sounds "like the distant roar of wind." Two rocking shocks at Union City were felt by many; buildings rocked and swayed. Two shocks, of five and four seconds duration, were felt by several at Milan; the motion was a "rapid rocking, N-S". At Clarksville, several persons felt the trembling motion which was strong enough to rattle furniture. The disturbance was felt at numerous other localities in Tennessee, including Covington, Dyersburg, Jackson, Paris, and Ripley. Although chimneys were

thrown down at North Jonesboro, Arkansas, damage in Tennessee was limited to the shattering of window panes and the breaking of dishes in the Memphis area where the intensity was V. (2, 5, 6, 11, 12)

1927, June 16, 7:00 a.m., *southern Appalachians* (VI)

A sharp local earthquake centered near Scottsboro, Alabama, was felt over much of Jackson and Madison Counties. At Scottsboro, it was felt by all; many rushed into the streets. The shock was attended by a noise, beginning with "a low rumble which mounted to a deep and deafening roar". It was felt also at Bridgeport, near the Tennessee state line, Dutton, Gurley, Huntsville, Stevenson, and Woodville. (5, 12)

1927, July 20, 3:58 a.m., *southern Appalachians*

According to *Seismological Notes*, "Newspaper reports state that violent earthquakes were felt in eastern and middle Tennessee on July 20th. No definite times of occurrence were reported". The writer's examination of several newspapers failed to indicate that an earthquake was reported in middle Tennessee, but there was a sharp local shock, accompanied by a loud explosive noise, in the Oakwood section of Knoxville at 3:58 a.m. Several windows were broken at the Oakwood School. Because of the loud explosive noise which attended it, the shock was believed to have been caused by the detonation of a charge of dynamite. Investigations by the Knoxville Police Department failed to disclose any evidence of a dynamite blast. Although the cause of the disturbance was never determined, the writer found that it resembled a blast much more closely than any known southern Appalachian earthquake. All of the *reported* effects of the disturbance could have been produced by the detonation of a dynamite bomb in the air near the school. The mention of Oakwood School in press accounts led to the assumption that the shock had affected the town of Oakwood, Montgomery County, in middle Tennessee. On basis of this assumption, Branner and Hansall (2) estimate the affected area to have been 70,000 square miles; actually, it was not more than a few square miles at the most. (*Knoxville News Sentinel* for July 20 and 21, 1927; *Knoxville Journal* for July 21, 1927). (2, 7, 11, 12)

1927, August 13, 10:00 a.m., *Mississippi Valley* (V)

A light earthquake at Tiptonville, Tennessee. "Many buildings creaked; rapid trembling motion." (2, 6, 12)

1927, October 8, 7:56 a.m., *southern Appalachians* (V)

A moderately strong earthquake was felt in all parts of Chattanooga and in suburban areas, including North Chattanooga, East Ridge, Lookout Mountain, Signal Mountain, St. Elmo, and Red Bank. The shock was felt in small and large buildings. Lights trembled and glassware, windows, and doors rattled. A few people were alarmed. Other mild shocks were

reported from 11:30 p.m. on October 7 to 2:00 a.m. on October 8. (2, 12)

1928, *March 6, 8:45 p.m., central Tennessee (II-III)*

Light earth shocks were reported at Franklin (Williamson County) and at Lynnville (Giles County). As these localities are 45 miles apart, the extent of the affected area is not known. According to Branner, it was felt also at Columbia. (2, 13)

1928, *April 15, 5:00 a.m., Mississippi Valley (III)*

A light shock at New Madrid, Missouri. Light shocks were reported also at Cape Girardeau, and Jackson, Missouri, at 9:05 a.m. (2, 6, 13)

1928, *April 23, 5:00 a.m., Mississippi Valley (III)*

"Trembling" was felt by many at Hickman, Kentucky. (2, 6, 13)

1928, *May 31, 4:40 p.m., Mississippi Valley (IV)*

A light earthquake characterized by a trembling motion was felt at New Madrid, Missouri. (There is some uncertainty as to the date of this earthquake; it may have occurred a few days earlier). (2, 6, 13)

1928, *November 2, 11:03 p.m., southern Appalachians (VII)*

A strong earthquake centered in the mountains of Madison County, North Carolina, at Big Pine (N 35.8°, W 82.8°), was felt over an extensive area in several states and as far away as Winston-Salem, North Carolina; Columbia, South Carolina; Atlanta, Georgia; Birmingham, Alabama; and Louisville, Kentucky. In Tennessee, the earthquake was felt generally in the mountains and in the Great Valley. In the larger cities, especially Knoxville, Chattanooga, Morristown, Greeneville, Erwin, Johnson City, and Bristol, people were awakened and frightened. Three frame buildings under construction at Johnson City were shaken down; a building under construction at Morristown was damaged. A chimney top was shaken off at Greeneville; bricks were shaken from chimneys and plaster was cracked at Newport. The number of shocks reported by observers ranged from one to three. In some sections of Asheville, people were rolled out of bed, bookcases were overturned, walls and one floor were cracked, dishes were thrown from shelves, and a heavy safe moved about on its rollers. At Bryson City, window panes were broken. The springs along Spring Creek, three or four miles west of the epicenter, became warm, and the warm springs at Hot Springs became hot. (*Asheville Citizen* for November 3 and 12, 1928; *The Knoxville Journal* for November 3, 1928). (5, 8, 13)

1928, *November 19, 10:45 p.m., southern Appalachians (IV)*

An earthquake shock was felt over an area of 10,000 square miles in western North Carolina and eastern Tennessee. It was felt most strongly at West Asheville and Hot Springs,

North Carolina, and at Erwin, Greeneville, and Johnson City, Tennessee. (*The Knoxville Journal* for November 20, 1928; *Asheville Citizen* for November 20, 1928). (11, 13)

1929, May 12, 9:50 p.m., *Mississippi Valley* (III)

A few light bumping shocks accompanied by a muffled roar, and lasting about three seconds, were felt and heard at Tiptonville, Tennessee, and at Hickman, Kentucky. (2, 10, 13)

1930, January 2, 10:30 a.m., *Mississippi Valley* (II)

A light shock at Ripley, Tennessee. (2, 6, 13)

1930, February 18, 11:00 a.m., *Mississippi Valley* (III)

A light shock, accompanied by a subterranean noise, was felt and heard by a few at Marked Tree, Arkansas. (2, 6, 13)

1930, February 25, 6:45 a.m., *Mississippi Valley* (III)

A light but abrupt shock felt by several at Cairo, Illinois. (2, 6, 13)

1930, March 26, 2:50 a.m., *Mississippi Valley* (II-III)

A light shock at Raleigh, Tennessee. A light shock at Memphis at 2:56 a.m. on March 27 is listed in U. S. Coast and Geodetic Survey Serial No. 539. The same shock probably was felt at Raleigh and Memphis, but it is not known which date is correct. (2, 6, 13)

1930, April 2, 3:39 a.m., *Mississippi Valley* (IV)

A light shock rattled dishes and windows at Caruthersville, Missouri. Felt in Lake and Dyer Counties, Tennessee. (2, 6, 7, 13)

1930, August 13, 2:00 p.m., *Mississippi Valley* (II)

A light shock at New Madrid, Missouri. (9)

1930, August 29, 12:27 a.m., *Mississippi Valley* (V)

Earthquake shocks were felt at Blandville and at Barlow, in Ballard County, Kentucky, and at Cairo, Illinois. At Blandville, four shocks in rapid succession rattled dishes, windows, and other loose objects. Sleepers were awakened. A sizeable area in Missouri was affected by this earthquake. A part of Lake County, Tennessee, is shown by Ramirez as being within the affected area. (2, 6, 9, 13)

1930, August 30, 4:28 a.m., *southern Appalachians* (V)

A strong earthquake shock was felt over a sizeable area in Roane, Loudon, and Blount Counties, Tennessee. Localities within the affected area include Kingston, Rockwood, Harri-man, Lawnville, and Oliver Springs in Roane County; Lenoir City in Loudon County; and Louisville in Blount County. Sleepers were awakened by the rocking motion and the accompanying explosive noise. (*Knoxville News-Sentinel* for August 31, 1930). (9, 11, 13)

1930, *September 1, 2:30 p.m., Mississippi Valley (IV)*

Light but abrupt earthquake shocks were felt in the tri-state area about New Madrid. The affected area included all of Lake County, the western half of Obion County, and the northwestern part of Dyer County, Tennessee. At Tiptonville, there were two shocks, rapid trembling and bumping, which were felt by many. The disturbance was felt also at Woodland Mills, Tennessee; and at Satron, Conran, Point Pleasant, Lilbourn, Parma, Steele, New Madrid, Gideon, Kennet, Dorena, Clarkton, Kewanee, and Marston, Missouri. At the latter locality, an old chimney was thrown down and bottles toppled from the shelves in a drug store. (2, 6, 9, 13)

1930, *September 3, 6:00 a.m. and 11:30 p.m., Mississippi Valley (III)*

Two light shocks at Blandville, Kentucky. (2, 6, 13)

1930, *October 16, 4:50 p.m. and 9:15 p.m., southern Appalachians (III-IV)*

An earthquake shock was felt in all parts of Knoxville at 4:50 p.m. and a second and lighter shock was felt in some sections at 9:15 p.m. Dishes were shaken from a cabinet on Woodbine Avenue and bricks fell from a chimney on Wells Street. (*The Knoxville Journal* for October 17, 1930) (11, 13)

1931, *April 1, 5:20 p.m., Mississippi Valley. (III)*

A light earthquake shock was felt at Cairo, Illinois, and at Lovelaceville, Mayfield, and Hopkinsville, Kentucky. The distribution of these localities indicates that the affected area was sizeable. (2, 6, 11, 13)

1931, *April 6, 9:37 a.m., Mississippi Valley (III)*

A light shock was felt in western Kentucky and recorded at St. Louis. (2, 6)

1931, *May 5, 7:18 a.m., northern Alabama (V)*

An earthquake attended by a roaring noise was felt over an area of more than 6500 square miles in Alabama and at isolated localities in Georgia and possibly South Carolina. It was felt strongly at Cullman (V) where objects fell from the walls of a blacksmith shop, and at Birmingham (IV) where it was observed generally and bricks were thrown from a chimney. It was felt less strongly at Bernard, Bessemer, Calera, Clanton, Colta, Decatur, Gadsden, Jones Valley, Lay Dam, Leeds, Lincoln, Montgomery, Pell City, Tuscaloosa, and a point "25 miles north of Tuscaloosa". A light shock was felt at Camille, Georgia, at the same time. (2, 5, 13)

1931, *July 18, 8:52 a.m., Mississippi Valley (IV)*

A sharp tremor reported to be "more severe than any in 10 or 15 years" was felt at Tiptonville, Tennessee, and New Madrid, Missouri. Houses shook, windows rattled, and trees

and telephone line poles swayed. People were alarmed, but no damage was done. (2, 6, 11, 13)

1931, *November 27, 3:23 a.m., central Tennessee (III)*

Several light shocks were reported at Nashville. (11, 13)

1931, *December 10, 2:12 a.m., Mississippi Valley (IV)*

A light earthquake shook houses and rattled windows at Blytheville, and Wilsons, Arkansas, and Hayti, Missouri. The extreme western parts of Dyer and Lauderdale counties, Tennessee, were affected by the shock. (2, 11, 13)

1931, *December 16, 9:36 p.m., northern Mississippi (VI)*

An earthquake centered near Batesville, Mississippi, affected a sizeable area in Mississippi, Tennessee, Alabama, Arkansas, and Missouri. In Tennessee, the earthquake was felt in nearly every locality south of the 36th parallel and west of the 87th meridian. It was felt along the Tennessee River from Scottsboro, Alabama, to Camden, Tennessee. The intensity of the shock in Tennessee attained a maximum of V at Raleigh. Other localities within the affected area include Memphis, Germantown, Selmer, and Henderson (IV), and Adamsville, Almo, Arlington, Bolivar, Brownsville, Dyersburg, and Savannah (III). (2, 5, 6, 13)

1932, *November 22, 1:57 a.m. Mississippi Valley (III)*

A light shock at Blytheville, and Paragould, Arkansas. (6)

1933, *March 11, 6:48 and 7:04 a.m. Mississippi Valley (III)*

Two distinct shocks at Poplar Bluff, Missouri. "Windows rattled and pictures shook." (6, 13)

1933, *December 9, 2:40 a.m., Mississippi Valley (V)*

Two strong shocks at Manila, Arkansas. Window panes were broken in several homes. Many people were awakened. (5, 6, 11, 13)

1934, *July 2, 9:10 p.m., Mississippi Valley (IV)*

A light shock at Memphis and Raleigh, Tennessee. Dishes and windows rattled, and telephone switchboards were flooded with calls from anxious residents. A light shock was felt in Pemiscot County, Missouri, at the same time. (6, 11, 13)

1934, *August 19, 6:47 p.m., Mississippi Valley (VI)*

An earthquake centered at Rodney, Missouri, affected an area of about 30,000 square miles in Missouri, Arkansas, Tennessee, Kentucky, and Illinois. At Charleston, Missouri, window panes were broken, chimneys were thrown down or damaged and objects were thrown from shelves. There was no damage in Tennessee, but the earthquake was felt at Miston (IV), where people were alarmed sufficiently to run out of doors; Dyersburg (III), Ripley (III), Union City (III), Clarksville (II), Martin (II), Paris (I), Tiptonville (III), and Obion (II). An after-

shock was felt at Cairo, Illinois, and at Wickliffe, Kentucky, at 9:37 p.m. (1, 6, 11, 13)

1935, January 1, 3:15 a.m., *southern Appalachians (V)*

An earthquake centered near Hayesville, North Carolina, was felt over an area of more than 7000 square miles in North Carolina, Georgia, and Tennessee. The shock was felt most strongly between Tipton, North Carolina, and Hiawassee, Georgia. In Tennessee, it was felt at Copperhill (IV) and at Knoxville. (4, 5, 7, 13)

1935, July 23, 7:28 p.m., *Mississippi Valley (IV)*

Two abrupt bumping shocks were felt by several at Tiptonville, Tennessee. (6, 13)

1936, January 1, 3:00 a.m., *southern Appalachians (III)*

A light earthquake centered somewhere between Murphy, North Carolina, and Blue Ridge, Georgia, was felt at Murphy, North Carolina, Blue Ridge, Ellijay, and Cleveland, Georgia, and in the Ducktown Basin of Tennessee. (11, 13)

1936, February 16, 11:05 p.m., *Mississippi Valley (IV)*

A light shock at Hayti, Missouri. (6, 13)

1936, August 2, 4:15 p.m., *Mississippi Valley (III)*

A light earthquake shock was felt at widely separated points east of the Mississippi River, including Tiptonville, Springville (Henry County), and Hickory Point (Montgomery County), Tennessee, and Cairo, Illinois. (6,13)

1936, October 20, 3:17 p.m., *Mississippi Valley (I)*

A light shock in the New Madrid area was recorded at the Florissant Station. (6)

1936, October 31, 10:11 a.m., *Mississippi Valley (I)*

A light shock centered in southeastern Missouri was recorded at the Florissant and Little Rock Stations. (6)

1937, January 30, 2:57 a.m., *Mississippi Valley (III)*

A light shock centered near Caruthersville, Missouri, was felt at Tiptonville, Elbridge, Hornbeak, Troy and Dyersburg, Tennessee. At Elbridge (III), the vibrations reportedly cracked the mortar in a few cisterns. (6, 10, 11, 13)

1937, May 16, 6:50 p.m., *Mississippi Valley (III)*

This light earthquake, centered at 36.08° N., 90.38° W, was felt over an area of more than 21,000 square miles in Arkansas, Tennessee, Missouri, Kentucky, Illinois, and Mississippi. In Tennessee, it was felt at Ripley, Alamo, Ashport, Crockett Mills, Curve, Fulton, Gates, Greenfield, Halls, Henning, Humboldt, Jackson, Memphis, Tipton, and Warren. Although the affected area was large, the intensity of the shock apparently

did not exceed III at any place in the six-state area. (5, 6, 10, 11, 13)

1937, June 23, 9:44 a.m., *Mississippi Valley (III)*

A light "bumping" shock at Tiptonville, Tennessee. (6, 13)

1937, October 5, 4:58 p.m., *Mississippi Valley (III)*

A light tremor at New Madrid, Missouri. (6, 13)

1938, March 16, 4:12 a.m., *Mississippi Valley (II)*

A light tremor "with origin probably in the New Madrid area" was recorded at Florissant. (6)

1938, March 31, 5:10 a.m., *southern Appalachians (IV)*

An earthquake centered in the mountains in the Little Tennessee River Basin affected an extensive area in western North Carolina and eastern Tennessee. Nearly everyone was awakened at Fontana, Santeetlah, and Tapoco, North Carolina, and Calderwood, Tennessee. At the Fontana copper mine on Eagle Creek, the duration of the shock was about 40 seconds. Houses shook, dishes and doors rattled, and towermen were frightened from fire towers on several peaks in the Great Smoky Mountains north of the river. The earthquake was felt at Knoxville, Sweetwater, Parksville, and Copperhill, Tennessee, and at Asheville, Waynesville, Bryson City, and Murphy, North Carolina. (7, 13)

1938, June 17, —, *Mississippi Valley (II-III)*

A light shock at Burdett and Luxora, Arkansas. Felt also in Lauderdale County, Tennessee. (13)

1938, September 17, 9:34 p.m., *Mississippi Valley (IV)*

An earthquake centered at 35°28' N, 90°20' W, near Marked Tree, Arkansas, affected an area of 90,000 square miles in Arkansas, Missouri, Kentucky, Tennessee, Illinois, Mississippi, and Oklahoma. Nearly all of western Tennessee was affected. The earthquake was felt with a maximum intensity of IV at Memphis, Covington, Ripley, Bolivar, Humboldt, Jackson, Huntingdon, Paris, Dyersburg, and Union City. It was felt as far eastward as Wildersville, in Henderson County. The main shock was preceded by a foreshock on September 17 at 4:57 p.m. and followed by an aftershock on September 18 at 1:20 a.m. (5, 6, 7, 11, 13, 14)

1938, September 19, —, *Mississippi Valley (III)*

A light earthquake shock was felt at Tiptonville, Tennessee. (7)

1938, September 28, 5:32 p.m., *Mississippi Valley (III)*

A moderate earthquake at Malden, Missouri, was recorded at Florissant. (6)

1939, April 15, 11:30 a.m., *Mississippi Valley (III-IV)*

A light earthquake was felt at New Madrid, East Prairie, Marston, Lilbourn, Gideon, and Matthews, Missouri. (6, 11, 13)

1939, May 4, 9:45 p.m., *southern Appalachians (V)*

A strong shock was felt at Anniston, Alabama. Loose objects were disturbed, furniture was moved, and people ran out of buildings to ascertain what was happening. The shock was felt with less intensity at Talladega, Blue Mountain, Choccolocca, De Armanville, Jacksonville, Jenifer, Weaver and Lincoln. (5, 13)

1939, June 24, 4:00, 5:27 and 6:45 a.m., *southern Appalachians (III-IV)*

Three shocks at Huntsville, Alabama, and vicinity. The stronger shock at 5:27 a.m., was felt from Athens to Paint Rock, Alabama, and from Guntersville Dam to Pulaski, Tennessee. The maximum intensity of this shock was IV at Huntsville. (11, 13)

1940, February 14, 5:10 a.m., *Mississippi Valley (III)*

A light shock of about 30 seconds duration at Blytheville, Arkansas. (6, 13)

1940, May 31, 1:02 p.m., *Ohio Valley (IV-V)*

A light earthquake affected an area of about 1000 square miles in the Ohio River valley from Henderson, Kentucky, to Cairo, Illinois. The shock lasted about 15 seconds and attained maximum intensity at Paducah, where canned goods were shaken from shelves in a grocery store. It was moderately strong at Metropolis and nearby localities in southern Illinois, but light at both Cairo and Henderson. There were no reports that the disturbance was felt at Kentucky Dam, Benton, Murray, Mayfield, or Fulton. (6, 7, 11, 13)

1940, October 19, 12:55 a.m., *southern Appalachians (IV)*

An earthquake which shook houses and rattled windows awoke thousands of sleepers in Chattanooga. It affected an area of more than 500 square miles in southern Tennessee and northern Georgia and was felt at such widely separated points as Charleston, Tennessee, and Dalton, Georgia. At Cleveland and Ringgold it was strong enough to disturb sleepers. A "low rumbling" sound accompanied the shock. (3, 7, 11, 13)

1940, November 23, 3:15 p.m., *southern Illinois (VI)*

A moderately strong earthquake centered near Waterloo, Illinois, affected an extensive area in Illinois, Kentucky, Tennessee, Missouri, and Arkansas. In Tennessee, it was felt throughout the Mississippi Valley from Tiptonville to Memphis. (7, 13)

1940, December 24, 8:30 p.m., *southern Appalachians (III)*

A light earthquake shock was felt at Greeneville, Tennessee, and Asheville, North Carolina, and at numerous other points in the two states. This shock affected much the same area as that at 1:50 a.m. on December 25, 1940. (7, 11, 13)

1940, December 25, 1:50 a.m., *southern Appalachians (V)*

This moderately strong earthquake affected an area of about 7000 square miles in eastern Tennessee and western North Carolina. Localities at which the shock was felt included Bristol, Elizabethton, Erwin, Greeneville, Johnson City, Jonesboro, Knoxville, Maryville, and Morristown, Tennessee, and Asheville, Burnsville, Canton, Green Mountain, Marshall, Skyland, Spruce Pine, and Weaverville, North Carolina. Houses were shaken strongly; and Christmas tree decorations fell to the floor. Thousands of sleepers were awakened at widely separated points. At Asheville, there were three distinct "rumbles" in rapid succession, followed by a "boom" like the report of an explosion. In Tennessee, the noise was described as a "heavy rumbling". (7, 13)

1940, December 25, "near midnight", *southern Appalachians (III)*

A light shock and explosive noise were felt and heard in the Asheville area "shortly before midnight". This shock was not reported in other parts of the area affected by the two preceding shocks. (7).

1941, March 4, 1:15 a.m., *southern Appalachians (III)*

A light earthquake shock accompanied by a rumbling noise which "seemed to recede toward the southeast" was felt at Rockford, Blount County, Tennessee. The motion was described as a "tremble". (7, 13)

1941, May 10, 6:12 a.m., *southern Appalachians (III)*

A light shock was felt in the northern and western sections of Asheville, North Carolina. (11, 13)

1941, June 28, 12:30 p.m., *Mississippi Valley (III-IV)*

A light shock at Vicksburg, Mississippi. (13)

1941, September 8, 4:45 a.m., *southern Appalachians (III-IV)*

An earthquake sufficiently strong to shake houses mildly, jar beds, and rattle dishes and venetian blinds, was felt throughout Chattanooga and as far to the west as Jasper. The shock was felt most strongly at the higher elevations, including Cameron Hill, Missionary Ridge, and Lookout Mountain. (7, 11, 13)

1941, October 8, 1:51 a.m., *Mississippi Valley (IV)*

A mild shock was felt at Tiptonville, Tennessee, and Blytheville, Arkansas. (13)

1941, October 21, 10:53 a.m., *Mississippi Valley (IV)*

A shock was felt at Cairo, Illinois, and Wickliffe, Kentucky. At Cairo, "furniture swayed" and dishes and windows rattled. (13)

1941, October 26, 10:00 p.m., *Mississippi Valley (III)*

Several people at Cape Girardeau, Missouri, felt a light shock. (13)

1941, November 14, 9:07 p.m., *Mississippi Valley (III)*

A light shock at Memphis; felt by many. (13)

1941, November 16, 9:09 p.m., *Mississippi Valley (V)*

A sizeable area in western Tennessee was affected by a fairly strong earthquake centered near Covington. The earthquake was felt by everyone in Covington and by many at Memphis, Ripley, Dyersburg, Henning, Frayser, and Pleasant Hill. A loud explosive noise preceded the trembling. Cracks appeared in the courthouse at Covington. (5, 13)

1942, August 31, 4:28 a.m., *Mississippi Valley (IV)*

A shock at Cairo was felt by many; some awakened. (13)

1944, January 7, 12:18 a.m., *Mississippi Valley (III)*

This light shock was felt in Perry, Cape Girardeau, and possibly other counties in eastern Missouri and in neighboring counties in Illinois. It was noticed at Jackson, Cape Girardeau, Perryville, Brazeau, and Oak Ridge, but it was not generally felt. (13)

1944, September 25, 6:37 a.m., *Mississippi Valley (III-IV)*

A light earthquake centered near St. Louis affected a large area in Missouri, southern Illinois, and southwestern Indiana. It was felt as far southward as Cairo, with an intensity of II-III. (11)

1945, June 13, 10:25 p.m., *southern Appalachians (V)*

This moderately strong earthquake, centered near Cleveland, Tennessee, affected an area of about 4000 square miles in eastern Tennessee and northern Georgia. At Cleveland, many frightened people ran into the streets. The shock and the concomitant rumbling noise were felt and heard southwestward to Chattanooga; southeastward to Blue Ridge, Georgia, eastward to Copperhill, and northeastward to Knoxville. (7, 13)

1945, July 26, 6:32 a.m., *southern Appalachians (IV-V)*

A four-state area of about 25,000 square miles was affected by this earthquake, which was centered near Columbia, South Carolina. The shock was moderately strong at Columbia, where an intensity of V was attained. In eastern Tennessee, it was light and not generally felt. The trembling motion was noticed by a few people in Knoxville. The disturbance was felt over a large section of North Carolina. At Raleigh, residents felt "floors weave" and noticed light fixtures swing. The shock was felt at Charlotte (IV), Asheville (IV), Hendersonville, Fletcher, Balsam, Skyland, Swannanoa, Pisgah Forest, and Brevard. In Georgia, it was felt at Macon and Augusta. (7, 13)

1945, September 23, 1:22 a.m., *Mississippi Valley (III-IV)*

Sleepers at Cairo, Illinois, were awakened by a light tremor. (13)

1945, November 13, 3:21 a.m., *Mississippi Valley (IV)*

An extensive area in southern Illinois, eastern Missouri, and western Kentucky was affected by an earthquake centered

near Cairo, Illinois. The shock was noticed at Perryville, Missouri, about 60 miles northwest of Cairo. (13)

1946, April 6, 12:00 (midnight), *southern Appalachians (III-IV)*

At Cleveland, Tennessee, a "sharp shock like truck hitting building reported by several in and near the town. Some heard sound like distant thunder on the horizon". (13)

1946, May 15, 12:10 a.m., *Mississippi Valley (IV)*

"Sharp tremors" were felt at Doniphan, Marston, and other points in southeastern Missouri. (11, 13)

1947, June 6, 7:55 a.m., *southern Appalachians (III)*

A light tremor was felt throughout the Knoxville area and southward to Neuberts and Topside. It was described by some as a "trembling, thunderous bump". Mr. Robert A. Laurence of the U. S. Geological Survey reported experiencing the shock in west Knoxville: "A slight jarring of the table was felt; not enough to rattle dishes or windows, but, nevertheless, distinct enough that my wife remarked about it and said it might be an earthquake." In south Knoxville, houses were strongly shaken; a rumbling sound was heard. (7, 13)

1947, December 1, 2:47 a.m., *Mississippi Valley (III-IV)*

Many residents at New Madrid and Poplar Bluff, Missouri, were aroused from their sleep by an earthquake. The shock was centered near Poplar Bluff. (13)

1947, December 15, 9:27 p.m., *Mississippi Valley (V)*

An earthquake centered near Osceola, Arkansas, was felt over an area of nearly 10,000 square miles in Arkansas, Tennessee, Mississippi, and Missouri. The shock was "quite sharp" at Osceola and strong at Lepanto, Rivervale, and Marked Tree, Arkansas; Memphis, Brownsville, Covington, Fulton, and Raleigh, Tennessee; and Hernando, Mississippi. At Memphis, where the intensity was IV, buildings were shaken with sufficient violence to cause panic among people in the upper stories of buildings. Table lamps rocked and dishes, doors, and windows rattled. At Covington, telephone operators reported the shaking of the switchboard and the rattling of windows. At Lepanto, a typewriter moved away from the typist and all of the "drops" on the telephone switchboard were knocked down. (7, 11, 13)

1947, December 27, 7:05 p.m., *southern Appalachians (IV)*

In the Chattanooga area, an initial light earthquake shock at 7:05 p.m. was followed immediately by a much stronger shock. The second shock affected an area of about 300 square miles in Tennessee and Georgia. It was felt at Chattanooga, Hixon, Cleveland, Red Bank, Ooltewah, Collegedale, and in the Sequatchie Valley, Tennessee, and at Rossville, Boynton, Oglethorpe, and Ringgold, Georgia. The disturbance was strongest east of Missionary Ridge, where it shook houses, rattled dishes and windows,

and caused piano wires to pop. One observer in the Sequatchie Valley reported three shocks about one-half hour apart. (7, 11, 13)

1948, *February 9, 7:04 p.m., southern Appalachians (V-VI)*

A very sharp local earthquake centered between LaFollette and Wells Springs, Tennessee, was felt over a four-county area. In the epicentral area, window panes were broken and screens were shaken from windows. Other localities within the affected area include Duff, Tazewell, Eagan, Valley Creek, Speedwell, Jacksboro, Sharps Chapel, Clairfield, Chasca, and Westbourne, Tennessee, and Pruden, Kentucky. A "rolling noise" accompanied the shock and caused some fear that there had been an explosion in a coal mine. (7, 13)

1949, *January 13, 9:45 p.m., Mississippi Valley (V)*

An earthquake of moderately high intensity was felt over an area of some 7000 square miles in western Tennessee, eastern Arkansas, southeastern Missouri, western Kentucky, and southern Illinois. In Tennessee, it was felt at Memphis, Brownsville, Covington, Ripley, Jackson, Huntingdon, Union City, Milan, Paris, Trenton, and Newbern. At Paris it shook pillows from beds, and "made floor lamps do crazy dances", overturning some of them. At Tiptonville, the disturbance was described as a hard shock followed by "three pulsing, rolling waves" about a second apart. Other localities reporting the shock include New Madrid, Poplar Bluff, Sikeston, Kennett, Hayti, Lilbourn, Malden, Caruthersville, Portage, and Chaffee, Missouri; Mayfield, and Murray, Kentucky; Cairo, Illinois; and Osceola, Blytheville, Luxora, and Wynne, Arkansas. (7, 13)

1949, *August 13, 3:45 p.m., Mississippi Valley (III)*

A light earthquake was felt in Missouri and Tennessee in the vicinity of Caruthersville. (7, 13)

1949, *September 16, 4:30 p.m., southern Appalachians (II-III)*

A light foreshock of the earthquake of September 17 rattled windows and was noticed by a few people in and around Pennington Gap, Virginia. (7)

1949, *September 17, 2:30 a.m., southern Appalachians (IV-V)*

An earthquake centered near Pennington Gap, Virginia, affected a sizeable area in southwestern Virginia and Harlan County, Kentucky. Many sleepers were awakened at Pennington Gap. The shock was "strong" also at St. Charles, Jonesville, Stone Creek, Station Creek, Duffield, and nearby points, and somewhat less intense at Clinchport, Dot, and Ewing. "There was at first a rolling uplift from deep in the earth like the roll of a great tide, ending in a violent jerk which shook houses and rattled windows." The noise which accompanied the vibrations was described as "a rumbling thud". (7, 13)

1950, June 18, 11:20 p.m., *southern Appalachians (IV)*

An area of about 6500 square miles in southeastern Tennessee, western North Carolina, and northern Georgia was affected by a light earthquake centered in the mountains of Blount County, Tennessee. The area of maximum intensity between Calderwood and Tapoco is near the geographical center of the affected area. At Tapoco, canned goods on shelves were dislocated. The shock was felt strongly at Alcoa, Maryville, and Knoxville, where many people were alarmed by the abrupt shaking of their homes. It was felt by many at Sweetwater and by a few at Oak Ridge. At Fountain City, the writer felt a light trembling motion and heard the rattling of window frames. Other localities reporting the shock include Andrews, Murphy, and Hayesville, North Carolina; and Blairsville, Blue Ridge, Hiawassee, and Young Harris, Georgia. A rumbling noise was heard over much of the area. (7, 11, 13)

1950, September 16, 11:48 p.m., *Mississippi Valley (III-IV)*

A light earthquake centered in Mississippi County, Arkansas, affected much of the Mississippi Valley section of Tennessee. It was felt at Memphis, Covington, Burlison, Fort Pillow, Fulton, Gold Dust, and Tiptonville, Tennessee; and at Osceola, Luxora, Driver, Rivervale, Roseland, and Edmondson, Arkansas. (7, 13)

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