LOST IN THE SAND

1903 flood left area mills, homes—and lives—in shambles

The days following the Pacolet River flood of June 6, 1903, were some of the most devastating in the history of the Clifton community.

More than 50 people were killed in the river valley when flood waters roared through the area on that grim Saturday morning. The Converse mill was almost totally destroyed, the factories at No. 1 and No. 2 were heavily damaged, and many mill houses were washed downriver.

The tasks of locating and burying the dead were gruesome. Friends and relatives spent days digging in the riverside sand and searching locations downriver for the missing. Residents also searched the area for belongings, as described by J. C. Garlington of the Spartanburg Herald, who visited Clifton two days after the flood:

"In the midst of the white sand stretching out like a prairie, a dozen men were clustered. One was digging and we imagined that perhaps the body of some loved one was being unearthed. The men were silent and disconsolate. They did not seem to notice our approach, but kept on watching the man who was digging. Investigation showed that this old man was delving into the foundations of his former home. Two feet under the sand he found a wire bed spring and he was carefully pulling the mud out of the springs. He could have found a dozen springs in the debris on the hillsides, but it was the last remnant of his home, and he tugged away to reclaim it. He said he had found a monkey wrench and a hat pin, and he prized them highly."

Similar scenes occurred up and down the river as the community tried to recover from its worst natural disaster. The flood was like nothing seen before or since in Clifton.

John Cantrell, who worked for Clifton Manufacturing Company and later owned a store in Clifton, was 21 years old and an employee of the No. 2 mill when the flood battered Clifton. In an interview with The Spartanburg Journal in 1957, he remembered some of the drama and tragedy:

Workers begin lengthy process of removing debris after the flood.

"I shall never forget the day nor the terror among our people as long as I live," he said. "The river finally gave way to many days and nights of hard rains. It busted loose. Saturday morning, very early, I was standing on a hillside in No. 2 mill village waiting for the streetcar which carried people to work. It was about 6 a.m. Suddenly, a crowd came running up the car tracks. They said Clifton No. 3 (the Converse mill) had washed away and the others were going down. Immediately, we went by carriage to the scene of destruction. We arrived there about 7:30 a.m.

"The water was high at Clifton No. 1. It kept getting higher. Houses were washing away. At No. 2 mill . . . I saw people hanging in trees all around.

After the flood, all that remained of the entrance to No. 1 mill was the tower. Building in right background is the mill office.

They had climbed there in an effort to avoid destruction in the flood. A man named Ike Wilson was in a tree on the west side of the river. He stayed there from 6:30 in the morning until 4:30 in the afternoon until the water went down enough for him to be rescued."

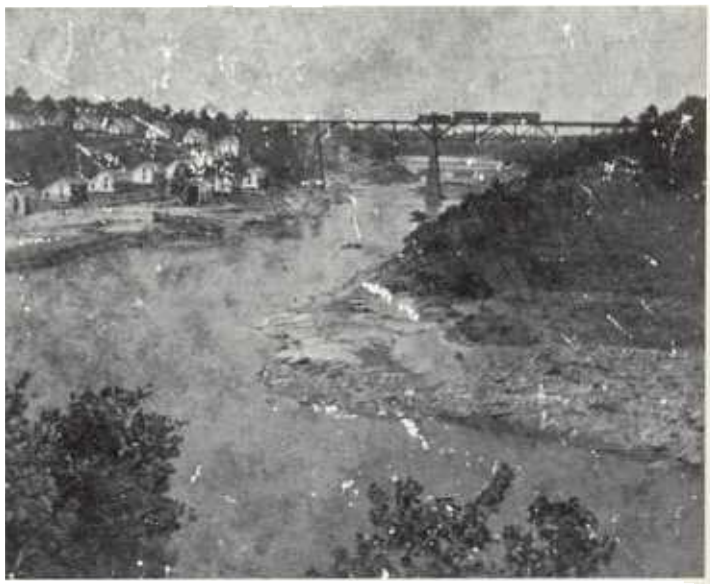
Cantrell helped rebuild the No. 2 mill.

The flood and its aftermath were stories of regional and national concern. Efforts to prevent a repeat of the tragedy began with studies of the nature of the flood and the storm that preceded it.

The United States Geological Survey of the Department of the Interior analyzed the Pacolet River flood as part of its report on *"Destructive Floods in the United States in 1903,"* printed in 1904. Circumstances surrounding the flood are described in detail in the following edited excerpts from *"Water-Supply and Irrigation Paper No. 96, Series M, General Hydrographic Investigations, 11"*:

"A destructive flood occurred in Spartanburg County, S. C., on June 6, 1903. Considering the small area affected by the storm, the precipitation was very large and the loss of life and property great.

"Character of country and streams—In the 24 hours of the storm there was a rainfall of from three and one-half to five inches in the counties of Cherokee, Spartanburg, Greenville, and the eastern half of Pickens, in South Carolina; and in the southern part of Rutherford, Polk, and Henderson counties, in North Carolina—a total area of 2,300 to 2,500 square miles. This region is situated on the southern slope of the Saluda Mountains. It does not extend up into the mountains, but includes the foothills and rolling country. About half of it is covered



An assortment of materials (left) was spread across the riverbank by flood waters. A train crosses the Converse trestle after flood waters had receded.

with timber; the remainder is cultivated and pasture land. The surface slopes are such that the water runs off rapidly and there is very little storage.

"The streams that drain this area are Pacolet, North, South, and Middle Tyger, and Enoree rivers. These are tributaries of Broad River and enter it from the west. The upper tributaries of Saluda River, which flow to the west, rose to an unusual height, but little damage was done on them. Practically all the damage was confined to Spartanburg County, S. C.

"The streams mentioned rise within a comparatively short distance of each other. North Fork of the Pacolet heads in Polk County, N. C.; all the others head in Greenville County, S. C. They are characterized by deep, narrow channels, with rapid fall. The Pacolet is said to have a fall of 500 feet from its head to Pacolet Mills, a distance of 35 miles. There are no ponds or wide bottom lands to hold back the water in time of flood. The ground was soaked almost to saturation just previous to the flood, so that there was very little ground storage.

"The storm—During the week preceding this flood there was rain over this area almost daily; not hard rains, but gentle, penetrating showers that nearly saturated the soil. On Friday, June 5, 1903, rains fell almost incessantly. In the evening the rain became more violent and continued until 4 a.m. without interruption.

"Weather Bureau reports show that the greatest precipitation in the area in the 24 hours was at Spartanburg, diminishing in amount in every direction from that place, rapidly to the northwest and southeast and gradually to the northeast and southwest.

"About one and one-half miles below was the original Clifton mill, known as No. 1. It was built in 1880, and had 27,500 spindles. At this point the rise was not alarming at 2 o'clock a.m. The rapid rise began at some time between half past 4 and 5. Just after 5 the water rose 2 feet in 10 minutes, according to the assistant superintendent. The first thing to be carried away was a large hall. This floated off at about 5:45 and was hurled down into the upper corner of the mill, which stood out into the stream. The blow broke in part of the corner of the mill, but the destruction of the mill did not begin until the wreckage from above began to come down thickly, a little after 6 o'clock. Large timbers were then dashed into the projecting corner and the mill began to settle down gradually, little by little, beginning at this end. Altogether about 110 feet of the main building and the wheelhouse were totally wrecked. The machinery on the two lower floors

Machinery and wreckage of Converse mill dominate the scene looking downstream toward the railroad trestle.

was severely damaged throughout the length of the mill by the water, mud, and drift. The dam was uninjured, except for the tearing off of the wooden apron. Fifteen cottages were carried away from this mill village. About 8 o'clock the water began very slowly to fall.

"Clifton mill No. 2, known as Dexter Mill, was a little over a mile from Clifton and was built in 1888, and had 30,500 spindles.

"This mill stood on a point on the left bank. Just opposite the mill the right bank is steep and high, while on the left bank a ridge extends out on the point almost to the mill. Above the mill, on either side of the river, the hills open out, and there the greater part of the mill village stood. Also on the point on the left bank below the mill were many cottages.

"The rise here began to alarm the watchman at 3 a.m., and at 3:30 it began to be rapid. One of the watchmen noticed that the rise was one foot in five minutes at about 4 o'clock. The alarm was sent out among the operatives at once. Most of them refused to realize that they were in any danger and would not make any effort to save themselves and their property until the water surrounded them. There were many narrow escapes, but at least 52 persons were lost here, most of them women and children. There was a deep deposit of sand and silt over the point below the mill where most of the lives were lost. Toward the end of the week following the disaster this began to crack as it dried. Searching parties kept watch of these cracks, and wherever flies were seen to crawl down them they dug. Several human bodies were found in this way.

"At about 20 minutes past 4 the covered wooden highway bridge was washed down. The cotton warehouses and some of the cottages began to go about 6 o'clock, but the mill stood until 7. At that time the wreckage was coming down thickly from the upper mills. Exactly as at the Clifton mill above, the outer upstream corner was torn down. This mill was L-shaped, a wing extending shoreward from the lower end. When the mill was surrounded by the flood the heavy wreckage from above was hurled into this extension, tearing down the middle of it and practically filling the whole with driftwood. The machinery throughout the two lower floors of this mill was largely destroyed by the sand and drift thrown into it. All the cotton and cloth warehouses here were washed away, 42 of the company's cottages and six belonging to outsiders were wrecked and carried away.

"After bending to the left about the point on which the mill stands the river formerly bent to the right

Debris was scattered in the river below the site of the Converse mill (left). At right, the remains of the riverside mill foundation.

again around a low point on the right bank. During this flood the water overflowed this low point and cut a new channel over it, abandoning the old one. The crescent-shaped island left is about 400 yards long and 100 wide.

"The precipitation northwest of Spartanburg was considerably greater than five inches. The washouts, landslides, and gullies cut by the flowing water indicate that the precipitation over the rain area was probably from 7 to 11 inches in the 24 hours preceding the morning of June 6, 1903. This region is included in an area that Prof. A. J. Henry, of the United States Weather Bureau, states is second in precipitation in the United States. The people who live in that region are accustomed to very heavy rains . . .

"The flood—There are no gauging stations on the streams on which the damage was done by this flood . . . The flood of Catawba River of May 1901, which caused great destruction of farming land, had an estimated run-off per square mile of 51.8 second-feet at the Catawba, N. C., station, and of 44.4 second-feet at the Rock Hill, S. C., station. The estimated run-off at Pacolet during the 1903 flood exceeded that of 1901 at the Catawba by 70 per cent and at Rock Hill by 100 per cent. It is possible, however, that the estimated run-off at Pacolet is too great. The method of obtaining the mean velocity is not very reliable.

"Destruction wrought by the flood—There was some destruction of property on Tyger River, but the largest amount was on Pacolet River, at Clifton mills and Pacolet mills. The destruction of the Clifton mills is thus described in the report of Mr. B. S. Drane:

"Clifton mill No. 3, known as Converse mill, stood just above the bridge over which the main line of the Southern Railway crosses Pacolet River. It was built in 1890 and 1895, and as completed was a four-story mill 496 feet long and 100 feet wide. It was valued at $1,000,000 and contained 50,100 spindles.

"The river was noticed to be about eight feet above low water at midnight, but did not appear to be rising, and caused no anxiety. At 3:30 a.m. Mr. Kirby, master machinist of the mill, upon going down, saw that the water was beginning to rise into the wheelhouse. Getting assistance, he began to remove belts and ropes, but before any headway had been made the water forced him to leave. By 4:30 the rise was beginning to be rapid, and in a few minutes the water was flowing over the right end of the dam and breaking on the boiler houses and shops. These were wrecked before 5 o'clock. A little after 5 the brick stack, 137 feet high, was washed down with the part of the dam immediately behind it; it fell on the corner of the mill. The mill began to wash down immediately, and the wreck was practically completed by 6 o'clock. The mill was washed entirely away, except for the three-story picker room. Shops, boiler houses, wheelhouse, and 16 cot-

The force of the raging water tore huge chunks from the No. 2 mill, requiring extensive rebuilding before the plant reopened.

tages were also carried away.

"The dam here had a section of 27 feet height, 27 feet base, and 11 feet crest. The construction was said to have been hasty and of materials much inferior to those usual on this river. The crest was broken off irregularly to a depth averaging 10 feet for 100 feet from the right bank, and to a depth of seven feet for the next 40 feet. One footbridge and one county bridge, of wood, were carried away from just below the mill.

"Several lines of the Southern Railway were tied up for about a week. The main line from Charlotte, N. C., to Atlanta, Ga., passing through Spartanburg, was broken by the washing away of a bridge over Lawsons Fork of Pacolet River. The Charleston and Western Carolina Railway, also entering Spartanburg, lost its bridge over Tyger River.

"What purports to be a very conservative estimate of the financial loss due to the freshet is given as follows: Clifton mills 1, 2 and 3: $1,750,000; Pacolet mills 1, 2 and 3: $1,250,000; Glendale mills: $30,000; Mary Louise mills: $18,000; Whitney mills: $5,000; Fingerville mills: $8,000; Tucapau mills: $10,000; Tyger mills: $8,000; two other mills: $20,000; bridges: $15,000; Converse Electric Railway Company: $30,000; Southern Railway Company: $300,000; lands and crops ruined, etc.: at least $6,000; total: $3,450,000.

"These figures do not include the loss due to the interruption of railway traffic, the stoppage of large industries throwing the thousands of operatives out of employment, the loss to the various trades and commercial enterprises, and worst of all, the loss of over 50 lives.

"Lessons taught by the flood—Very heavy storms, covering small or large areas, are to be expected on the southern and eastern slopes of the Appalachian Mountains. Floods much greater and more destructive than ordinary result from these storms.

"Ample unobstructed waterway must be provided for streams through towns. Usually the greater part of the destruction wrought is due to the failure of a temporary dam formed by drift in front of a bridge. Drift of all kinds collecting in front of a bridge forms a dam and raises the water several feet higher than it would have been without the obstruction. Finally the pressure on the obstruction becomes so great that it is swept away, and the resulting wave destroys other bridges and buildings that otherwise would not have been injured. The washing out of a dam by the water cutting a channel around one end of it is often the cause of a great wave that sweeps away bridges and buildings below that otherwise would not have been injured.

"Buildings that can be lifted from their foundations and swept away should not be allowed in the path of a possible flood.

"Mills, power stations, and other buildings on the banks of streams should be protected from the destructive action of drift during high water."

CLIFTON
A River of Memories

A Companion Volume
to
A Place Called Clifton

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Published by Michael Hembree and David Moore

Printed in the United States of America by Jacobs Press of Clinton, South Carolina

Library of Congress Catalog Card Number: 88-91200