a muddy field in North Carolina, he lay there stunned and in disbelief. He was battered, bruised, freezing, bleeding, exhausted—but alive!

He glanced at his watch. It was 6:40. A descent that should have taken less than 10 minutes had taken 40. By that time, Lt. Herb Nolan was landing his Crusader safely in South Carolina.

Eventually, Rankin cut himself loose from the chute with a big knife and stumbled to a rural highway, where he tried to flag down a motorist in the pouring rain. He needed to get medical help immediately, but car after car slowed, paused, and then flew past without stopping. It might have had something to do with his appearance, he realized later: Looming out of the darkness at the side of the road, he was a frightful sight "in my tattered flight suit and Buck Rogers helmet, my face swollen and raw, blood caked on my face, still oozing... from my mouth, nose and ears, a large naked knife flashing in my hand."

It took him a long time to catch a ride, but eventually a car stopped. It was a farmer with four young boys in the backseat. The boys' eyes widened when Rankin told them he was a Marine jet pilot who had just parachuted down through the storm when his plane crashed. The boys immediately started to quarrel over who had seen Rankin first.

"Here, boys. Thanks," Rankin told them soothingly. "I owe you my life."

And then their eyes grew even wider when Rankin pulled off his battered helmet, a relic of one of the most hair-raising rides in human history, and tossed it into the backseat of the car.

"There's your souvenir," he said. ■

Tragedy and Rescue During

The Joplin Tornado Catastrophe

It was the deadliest tornado to hit America since 1947, as well as the costliest in US history. The death toll reached 161 with another 1,000 injured, wreaking havoc and devastation over miles of land. The powerful winds destroyed nearly 3,800 homes and buildings, including Joplin's high school. Over 9,000 people were rendered homeless in a matter of minutes. Here is the dramatic account of one of the worst catastrophes in recent memory.

- Shimon Rosenberg

The year 2011 was a particularly difficult one in terms of weather for America, with tornados following one on another like never before. The "tornado outbreak" that lasted from April 25-28 was the biggest ever on US soil. There is no other year known in which so many tornados occurred at once. The entire South, Midwest and Northeast were affected by heavy storms that left indescribable devastation in their wake.

At least 358 individual tornados broke out in 21 states, from Texas through New York, and even touching southern Canada. Four of those tornados were ranked EF5, the most powerful tornado possible (see previous article) and left behind severe damage and many fatalities. The series of tornados led to the deaths of 348 people. And that tornado outbreak followed on a previous wave of 150 tornados that occurred two weeks earlier, affecting eastern Oklahoma through central North Carolina and leaving behind 38 dead.

Yet another tornado outbreak lasted from April 19 through 24 in the Midwest and southern states, including an EF4 tornado that hit St. Louis, Missouri—the worst such storm to strike that city in 40 years. Thousands of homes and other buildings were damaged. Among them was the main terminal of the St. Louis International Airport, whose windows were all smashed and furniture tossed about like ragdolls in the violent winds.

By the end of April, the United States had suffered through more than 700 tornados, the most ever recorded in a single month anywhere. In the ensuing weeks the extreme weather slackened off and people began to breathe somewhat easier. It looked like it was all over.

And then came May 22.

A Typical Day

A series of rainstorms swept through southwest Missouri and headed straight for the city of Joplin, a lead-mining town with a population of 50,000. The residents of Joplin had no knowledge of the tremendous danger they were facing or the monstrous storm that was heading in their direction.

The day began exactly like any other. The weather was pleasant and the sun shone down with full force. There was not a trace of a cloud in the sky to hint about the approaching storm. That day, in Joplin's high school, many people were assembled to celebrate the graduation of the senior class. The students sat up front while their parents and family members looked on proudly and listened to the speeches honoring the momentous occasion.

Late in the afternoon, though, just as the students began to leave the high school building with their diplomas in hand, escorted by their parents and family, the tornado sirens in western Joplin began to sound. (Tornado sirens are much louder and last much longer than typical fire or other sirens.)

Meteorological officials warned the residents to be on their guard. Weather instruments had detected a heavy rainstorm passing through southeast Kansas and southwest Missouri. There was a strong possibility that the winds of the rainstorm could form a tornado.

"A tornado warning is in effect until 6:00," one weatherman announced. "The best thing you can do at this time is to seek shelter, and we encourage you to do so immediately."

People listened to the warning, but nobody panicked. Tornados are notoriously difficult to predict; conditions often seem perfectly suited for a tornado to form, but nothing happens. It is also very difficult to know in which direction a tornado will choose to head before it actually touches down on the ground—and even afterwards.

The best way to get accurate information about an impending tornado is through storm chasers (sometimes referred to as tornado hunters). Generally these are meteorologist experts who spend countless hours on the road tracking storms during the annual tornado season to gather information that

A view of downtown Joplin before it was ravaged by the cyclone of the century.

assists scientists in understanding tornados. They also serve to warn the population that a tornado is approaching and to warn people to seek cover (see accompanying article).

On the afternoon of May 22, 2011, a fairly large number of tornado hunters were on their way to Joplin. While still about 10 miles out of the city, several of them observed the skies turning black. When they were just five miles away they suddenly found themselves directly in the path of the storm.

Two of the storm chasers came as close as they dared and then stopped their car. They rolled down their windows and listened in fascination to the howl of the high-speed winds. One storm chaser picked up his telephone and called the local tornado warning office. "Yes, I'm calling because I see a large, destructive tornado heading toward the south side of Joplin now.... Yes, a large, destructive tornado. I see it on the ground!"

This was not a small, everyday tornado. It was a massive twister that was approaching the city very rapidly. The caller was angry. Nobody seemed to be taking the danger seriously.

At the same time, another tornado hunter named Jeff Piotrowski watched with helpless trepidation as the events unfolded. It was if a large army was preparing to attack the city, but nobody was doing anything about it. When Piotrowski had set out to track the rainstorm a few hours earlier in anticipation that it might result in a tornado, he had not

Joplin's high school after the tornado.

dreamed that he would come face to face with an EF5. He imagined the far more common EF3, or perhaps an EF4.

When he first arrived in downtown Joplin at 5:30, he was momentarily distracted by the picturesque scene. However, as he turned onto Highway 66 he again saw the black clouds of doom in the distance. He had never seen such a dark horizon in his life.

Turning onto a side street, Piotrowski noticed a patrolman sitting in his car at the side of the road. As he looked up, Piotrowski spotted sparks shooting off of power lines. He knew right away what that meant: the tornado had struck!

Piotrowski pulled up alongside the police car and rolled down his window. There was an edge of panic in his voice. "Guys, the