

**NARRATIVE  
NONFICTION**  
reads like fiction  
but it's all true

# BLACK SUNDAY

Surviving the biggest dust storm  
in American history

BY LAUREN TARSHIS

**AS YOU READ**

What were the causes and effects of Black Sunday?

**C**atherine Hattrup believed the world was coming to an end. It was Sunday, April 14, 1935, and Catherine, 9, was enjoying a quiet afternoon at her grandmother's house in Hodgeman County, Kansas.



Catherine Hattrup, age 5



GARY HANNA; COURTESY OF HATTRUP FAMILY (CATHERINE HATTRUP)



### NATIVE AMERICANS

Though weather on the Southern Plains was extreme, the Native Americans who lived there respected the area's wildness. One Comanche chief praised it as a place "where the wind blew free and there was nothing to break the light of the sun."

### TORN FROM THE EARTH

Newly arrived farmers tore out about 5.2 million acres of tall prairie grass—an area roughly the size of Massachusetts—to make room for wheat crops. Soon, almost no prairie grass remained.



Suddenly, Catherine's grandmother rushed inside the house. "Oh my!" she cried. "There's a terrible black cloud. And I have no idea what it is!"

For hundreds of miles around, people gazed up at the same horrifying sight: a mountain of boiling blackness churning through the sky.

Was a violent thunderstorm closing in? Was a massive tornado about to strike?

No. It was a dust storm—the biggest in U.S. history. Three hundred thousand tons of dried-up soil had been swept into the air, forming a swirling cloud of dust wider than the state of Indiana. That cloud was speeding over the land at 65 miles per hour, **wreaking havoc** wherever it went.

And it was headed straight for Catherine and her grandmother.

### Nature in Balance

Extreme weather events like tornadoes and hurricanes are natural disasters—events in nature that result in great damage or loss

of life. The colossal dust storm of April 14, 1935, was caused not by nature but by another destructive force: humans.

To understand what happened, we need to go back in time to when Kansas and the surrounding areas were mostly empty wilderness. The region, known as the Southern Plains, contains parts of Kansas, Colorado, Texas, New Mexico, and Oklahoma. Millions and millions of acres of tall prairie grasses once covered this flat and treeless part of the country.

Those prairie grasses seemed almost indestructible. Some types stretched 6 feet tall, with tightly woven roots that reached 9 feet down into the earth. The **hardest** grasses could withstand the pounding hooves of buffalo that stampeded across the plains. The roots could survive the fires ignited by lightning strikes. Most important, those grasses could endure the area's brutal weather: frozen winters,

roasting summers, and bone-dry periods of drought.

The Southern Plains was a harsh environment, to be sure, but for thousands of years, nature had existed in balance. The people who lived in the area, members of Native nations like the Comanche and Kiowa, left the prairie grasses mostly untouched.

### Ripping Up the Grass

By the late 1800s, much of the Southern Plains had been transformed.

The U.S. government wanted to fill up the American wilderness with towns and cities and farms. It forced Native Americans from their

lands and lured white settlers to the area with offers of free or very inexpensive land.

Not surprisingly, settlers arrived by the thousands. Catherine's grandfather was one of them. He came from Ireland around 1890, eager to start a new life as a farmer in this promising new land.

Before settlers could plant crops, they had to remove the prairie grasses to make room. It turned out that the grasses weren't indestructible after all. Using axes, sharp-bladed plows, and their bare hands, farmers ripped the grasses from the earth. Within two decades, millions of

acres of grassland had been turned into wheat farms.

### A Hopeful Time

The new farms **flourished**—at first. The years between 1910 and 1930 were unusually wet on the plains, and with such plentiful rain, crops grew quickly. Towns, stores, and churches sprouted up almost as swiftly as the wheat.

It was during this hopeful time that Catherine was born, in 1925.

Catherine's father grew wheat and raised cattle on a farm about

17 miles from the town of Kinsley, Kansas. One of seven children, Catherine dreaded "girl chores" like laundry and cooking; she loved riding horses and following her father out into the fields. She and her brothers and sisters attended a one-room schoolhouse 3 miles from their farm.

Catherine's childhood was a happy one, but hard times **loomed**—hard times from which few on the plains would be spared.

### Dreams Turned to Dust

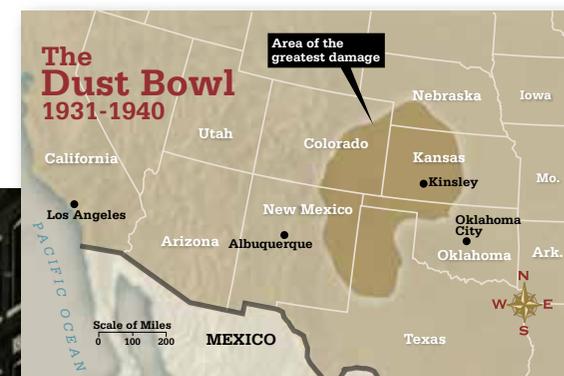
The problems for plains farmers began in 1930, when America faced a crisis that would become known as the Great Depression. Banks around the country ran out of money, and millions of people lost their jobs. Farmers on the plains were hit especially hard because the price of wheat **plummeted**. This meant farmers earned far less for the crops they grew. Suddenly, families like Catherine's struggled to pay their bills.

The economic hardships were just the beginning.



LIBRARY OF CONGRESS (NATIVE AMERICANS); COURTESY OF THE KINSLEY PUBLIC LIBRARY ARCHIVE (TOWN); JAMES STEINBERG/SCIENCE SOURCE/GETTY IMAGES (PLAINS)

INSTITUTE FOR REGIONAL STUDIES/NDSU/FARGO (2026.17) (TRACTOR); JIM McMAHON/MAPMAN® (MAP)



### BRAND-NEW TOWNS

Catherine grew up near Kinsley, Kansas (left), one of many towns that sprang up on the Southern Plains as settlers moved to the area.



The year 1932 brought a second and even more frightening crisis: a drought. The rain simply stopped. All spring, day after day after day, the sky stayed blue. Then came the summer and with it, blistering heat. Crops withered. Without the protective layer of prairie grass, soil dried up and was carried away by the wind. On windy days, the air turned gritty with dust, the sky a dirty brown.

This dust **permeated** everything. Catherine's mother would rinse the family's dust-coated plates before meals and lay a cloth across the food, keeping it covered right up to the moment that everyone was ready to take a bite.

The dusty winds were nothing compared with the storms that came next: enormous clouds roiling with dust and dirt. These storms snuffed out the sun and dumped piles of dirt big enough to bury animals, destroy crops, and fill basements. People caught in a dust storm would choke as dust rushed up their noses. The swirling grit would rake across their skin like millions of tiny claws.

As time went on, the storms became increasingly frequent. Many people began to understand that removing all of that prairie grass had been a terrible mistake. But nobody could agree on what to do about it. Meanwhile, life grew more desperate for those living on the plains.

Catherine's family was lucky. Money was scarce, but there was always food on the table. This was



not so for everyone. During this period, many people lost everything. As the land turned to dust, so did their dreams. By 1935, tens of thousands of people had abandoned their farms. Those who stayed hoped and prayed for better times.

### The Black Cloud

On the morning of April 14, 1935, it seemed those better times might have arrived at last. For the first time in weeks, the blue sky wasn't swirling with dust. A sweet



### MOUNTAINS OF DUST

Raging dust storms buried houses under towering piles of dirt, some as high as 20 feet. The dust seeped underneath doors and through cracks in window frames, ruining everything inside. The dust was especially dangerous for children and older people, who often became ill with "dust pneumonia." At right, three Kansas kids protect themselves by wearing goggles and homemade masks on their way to school.

COURTESY OF THE CROWLEY COMPANY/LIBRARY OF CONGRESS (DUST MOUNTAIN); HASKELL PRUETT COLLECTION/OKLAHOMA HISTORICAL SOCIETY (FOOD STORE)



COURTESY OF JOYCE UNRUH/GREEN FAMILY COLLECTION (CHILDREN WITH COVERED FACES)

breeze blew through the air.

Few could have imagined the horror that was about to strike.

That morning, Catherine went to church with her family, then to her grandmother's house. She loved her days with her grandmother, who spoiled her with freshly baked bread slathered with butter and homemade grape jelly.

Catherine and her grandmother were enjoying the pleasant afternoon—until the black cloud appeared on the horizon.

A dust storm of unequalled power and size—stretching 200 miles wide and 8,000 feet into the sky—raced across the earth, chasing thousands of terrified birds and animals. The storm, far bigger than any that had come before, turned the day

black. Farmers staggered blindly through their fields. Cars crashed. Whether anyone died because of the storm is unknown, but hundreds were rushed to hospitals with a condition called "dust pneumonia," caused by the dust they had inhaled.

### Hardships and Hope

More than 80 years later, at the age of 91, Catherine can still remember the terror of the day that became known as "Black Sunday." She remembers how she huddled with her grandmother through the hours-long storm, how they prayed together. They could only imagine what was happening in the world beyond, where the dust was so thick even car lights couldn't shatter its darkness.

Lightning flashed; thunder sounded. Neighbors desperately covered their windows with damp sheets to try to keep out the black dust—but the storm was too strong.

"I really did think the world was coming to an end," Catherine recalls.

But of course it did not, and Catherine and her family made it through. There was even a bright side to Black Sunday. The storm was so catastrophic that it forced the country to face this fact: Humans had broken the prairie. Now it was up to humans to fix it.

In the coming years, millions of trees and prairie grasses were planted across the plains. Farmers learned how to farm in a way that was kinder to the environment and protected the land. The weather shifted, and by the late 1930s, the drought was over. There has never been another dust storm as massive as Black Sunday.

After the storm, many people left the plains, but Catherine and her family remained. Catherine later married, had five children, and settled not far from the Hatrup family farm.

The dusty days of her childhood had many hardships. But days like Black Sunday taught Catherine lessons that have stayed with her always.

"I learned that even when things didn't work out quite right," Catherine says, "I should be thankful for everything." ●

**TURN THE PAGE**  
to read  more.

# Choking on Smog in Delhi

*As the air turns toxic, residents struggle to breathe*

By ELLEN BARRY

NEW DELHI, INDIA—For days, many in Delhi have been living as if under **siege**, trying to keep the dirty air away from their children and older parents.

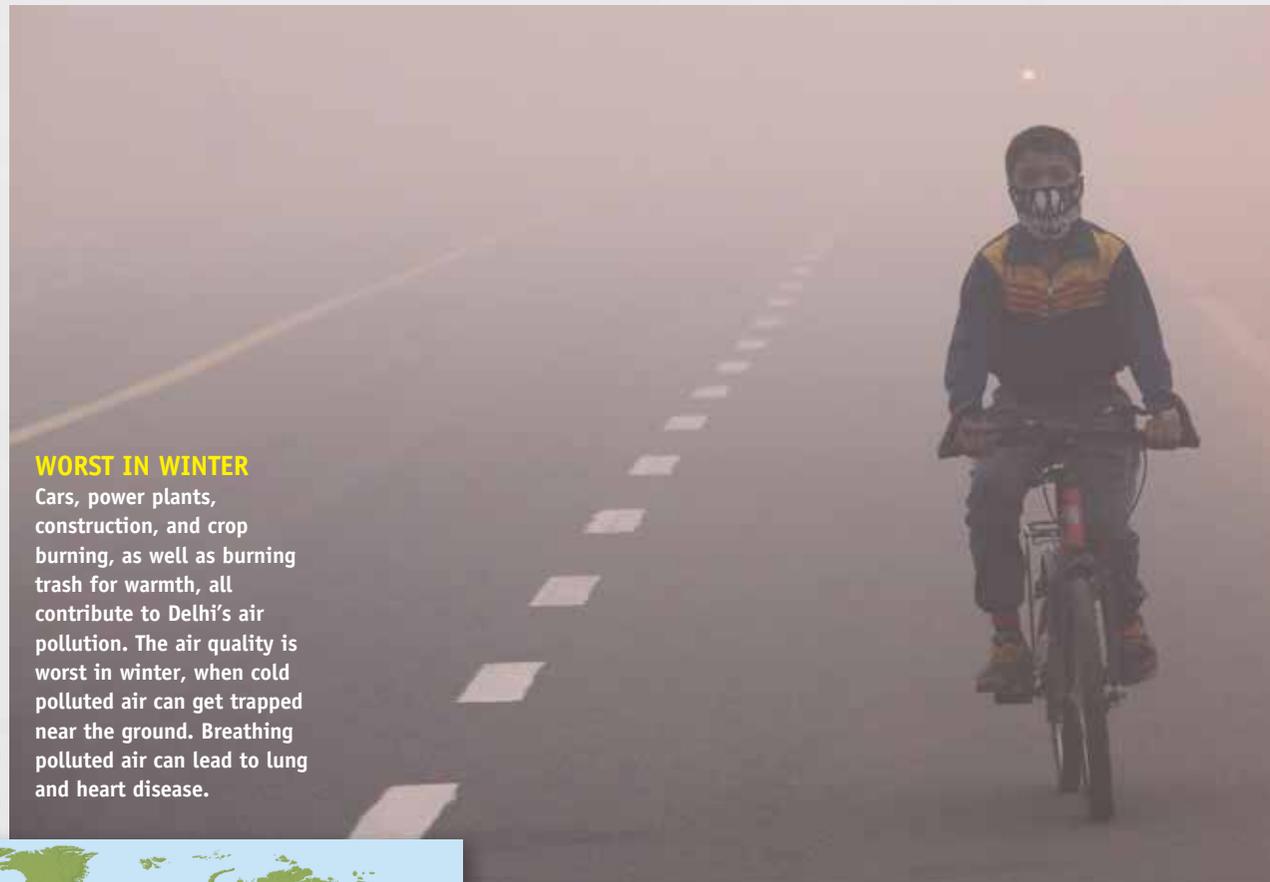
But it is not easy.

Open a window or a door, and the haze enters the room within seconds. Outside, the sky is white, the sun a circle so pale that you can barely make it out. The **smog** is **acrid**—eye-stinging and throat-burning. And it is so thick that it is being blamed for a 70-vehicle accident north of the city.

## A Crisis

In past years, Delhi's roughly 20 million residents shrugged off wintertime pollution as fog. Over the past week, however, they viewed it as a crisis.

Levels of the most dangerous particles, called PM 2.5, soared. In some places, the level of PM 2.5 in the air was more than 16 times the limit that India's government considers safe. The damage from **sustained** exposure is the same as smoking



## WORST IN WINTER

Cars, power plants, construction, and crop burning, as well as burning trash for warmth, all contribute to Delhi's air pollution. The air quality is worst in winter, when cold polluted air can get trapped near the ground. Breathing polluted air can lead to lung and heart disease.



more than two packs of cigarettes a day.

"There is so much smog outside that today, inside my house, I felt as though someone had just burned a few sheets

of paper," said Amaan Ahuja. "You can literally see smoke in the air, and when you breathe, you can smell it, too. We are trying to keep the kids indoors with all the windows closed."

Tulika Seth described her family's life over the past week as "unnatural and disturbing." Asked where she lived, she responded, "a gas chamber."

RAJAT GUPTA/EPA/NEWS.COM (CHILD ON BIKE); SHUTTERSTOCK (PAPER); JIM McMAHON/MAPMA@ (MAP)

and a three-day closure of about 1,800 public schools. On Monday, the city government released a list of health guidelines, advising citizens to wash their eyes with running water and to go to a hospital if they were experiencing symptoms like "breathlessness, giddiness, chest pain, and chest **constriction**."

According to Bhargav Krishna, who manages the Public Health Foundation in India, these emergency measures are decent. But, he says, "They're not solving the long-term problem" of air pollution.

## "We Wear Masks"

Changing weather conditions are likely to **disperse** the dense cloud of pollutants over the next few days. But the next few days will also put more pollution into the air. As it turns cold, Delhi's poor will burn trash, including plastic and rubber, for warmth. Fireworks will be set off for the Hindu festival Diwali. And then there are the regular sources of pollution, including cars and construction.

Public anger over Delhi's air is more **palpable** than in previous years. People are also more likely to identify pollution as the cause of

their health problems.

Anumita Roychowdhury, who runs the air pollution program at the Center for Science and Environment, said that sense of urgency would have to be sustained if the city were to impose changes, such as restrictions on car travel. "This has to translate to very strong support for very hard decisions," she said.

First, though, people here must get through the next few days. Sherebanu Frosh, who lives south of Delhi, said she and her children were "**covering** by our air purifiers," which had become overloaded. "So we're putting both our purifiers in one room and spending the day there," she said. "If we leave, we wear masks."

Jessica Farmer, whose children attend the American Embassy School in Delhi, said she had moved five purifiers into three rooms of her house. Still, the concentration of PM 2.5 in some places remained at 300, five times the recommended limit.

"We can't go outside, to malls or movies where the air is not purified," Ms. Farmer said. "How can one live like this?" ●

## Emergency Measures

On Sunday, Delhi's chief minister announced a series of emergency measures, including a five-day stop on construction, a 10-day closure of a power plant,

## WRITING CONTEST

How can efforts to improve human life lead to harming human life? How can we fix the problems we create? Support your answer with details from "Black Sunday" and "Choking on Smog in Delhi" as well as your own ideas. Send it to **AIR CONTEST**. Five winners will each get *The Storm in the Barn* by Matt Phelan. See page 2 or details.

GET THIS  
ACTIVITY  
ONLINE

FROM THE NEW YORK TIMES, NOVEMBER 7, 2016. COPYRIGHT 2016 BY THE NEW YORK TIMES COMPANY. USED BY PERMISSION.