

BLOWUP:

WHAT WENT WRONG AT STORM KING MOUNTAIN

Sebastian Junger

The main thing Brad Haugh remembers about his escape was the thunderous sound of his own heart. It was beating two hundred times a minute, and by the time he and the two smoke jumpers¹ running with him had crested a steep ridge in Colorado, everyone behind them was dead.

Their coworkers on the slope at their backs had been overrun by flames that Haugh guessed were three hundred feet high. The fire raced a quarter mile up the mountain in about two minutes, hitting speeds of eighteen miles an hour. Tools dropped in its path were completely incinerated. Temperatures reached two thousand degrees—hot enough to melt gold or fire clay.

10 “The fire blew up behind a little ridge below me,” Haugh said later. “People were yelling into their radios, ‘Run! Run! Run!’ I was roughly one hundred and fifty feet from the top of the hill, and the fire got there in ten or twelve seconds. I made it over the top and just tumbled and rolled down the other side, and when I turned around, there was just this incredible wall of flame.”

Haugh was one of forty-nine fire fighters caught in a wildfire that stunned the nation with its swiftness and its fury. Fourteen elite fire fighters perished on a spine of Storm King Mountain, seven miles west of Glenwood Springs, Colorado. They died on a steep, rocky slope in a fire initially so small that the crews had not taken it seriously. They died while cars passed within sight on
20 the interstate below and people in the valley aimed their camcorders at the fire from garage roofs.

There were many other fire fighters on Storm King when Brad Haugh crested the ridge, yet he feared that he and the two men with him were the only ones on the mountain left alive. That thought—not the flames—caused him to panic. He ran blindly and nearly knocked himself unconscious against a tree. Fires were spotting all around him as the front of the flames chased him. The roar was deafening; “a tornado on fire” was how he later described it. The light, he remembered, was a weird blood-red that fascinated him even as he ran.

ANALYZE VISUALS
How would you feel if you were photographing this scene?

1 smoke jumpers: people who fight forest fires by parachuting

than wait for their crew mates, these nine hotshots started downslope into the burning valley. ©

The layout of Storm King Mountain is roughly north-south, with a central spine running from the 8,793-foot summit to H-2. Another half mile south along this ridge was the larger site, H-1. The fire had started on a steep slope below these cleared safe areas and was spreading slowly.

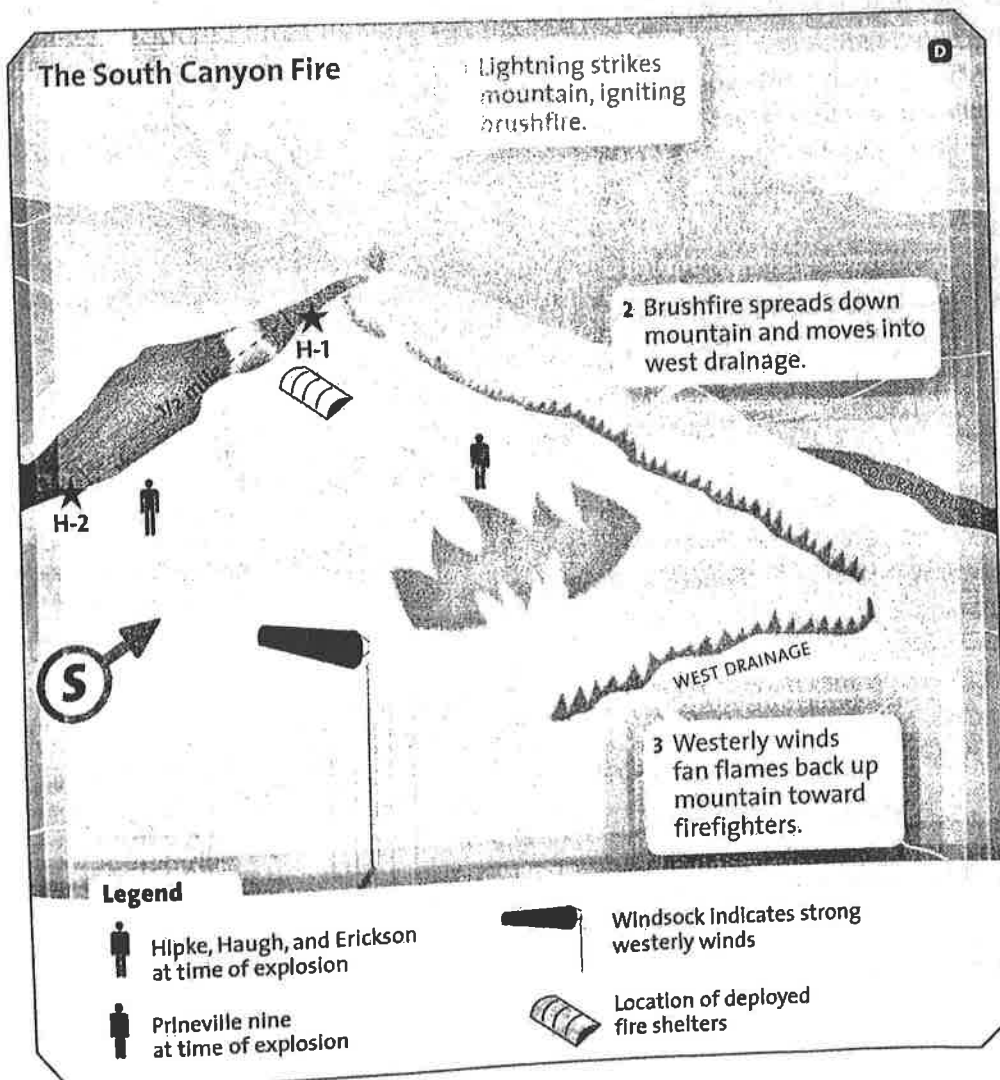
The strategy was to cut a wide firebreak⁴ along the ridgetop and a smaller line down the slope to contain the blaze on the southwestern flank of the ridge. Flare-ups would be attacked with retardant drops⁵ from choppers. If there were problems, crews could easily reach H-1 in five or ten minutes and crawl under their fire shelters—light foil sheets that resemble space blankets and **deflect** heat of up to six hundred degrees.

4. firebreak: a natural or constructed barrier used to stop fires that may occur.
5. retardant drops: the air-dropping of chemicals to help retard or delay the spread of fire.

C NARRATIVE NONFICTION

What do you learn from Junger's characterization of the smoke jumpers?

deflect (dĭ-fĕkt') v. to fend off or avert the direction of something



D GRAPHIC AIDS

Study the graphic shown. What does it tell you about the progress of the fire? What other spatial relationships does it show?

deployed with the Prineville nine. Apparently, no one had advised them that the situation was becoming desperate. In the few minutes it took Mackey to join the twelve fire fighters, the fire jumped east across the drainage. "I radioed that in," said Haugh. "And then another order came to evacuate." That order came from Butch Blanco on the ridgetop, who was hurriedly conducting the evacuation. "This was a much stronger warning than the previous one," recalled Haugh. "I sent my swamper to the ridgetop with a saw and radioed that as soon as the lower Prineville contingent came into sight below me, I would bump up to the safety zone."

Suddenly, fierce westerly winds drove the fire dangerously close—though still hidden behind the thick brush—to the unsuspecting fire fighters. "The crew was unaware of what was behind them," said Haugh. "They were walking at a slow pace, tools still in hand and packs in place." As Haugh watched them, a smoke jumper appeared at his side. "He said that his brother-in-law was down in the drainage, and he wanted to take his picture."

140 That fellow was Kevin Erickson, and Don Mackey was his brother-in-law, now in serious trouble below. As Erickson aimed his camera, everything below him seemed to explode. "Through the viewfinder, I saw them beginning to run, with fire everywhere behind them," Erickson said. "As I took the picture, Brad grabbed me and turned me around. I took one more look back and saw a wall of fire coming uphill." Closing in on Haugh and Erickson were smoke jumper James Thrash and the twelve other fire fighters in a ragged line behind him. Though Blanco and others were now screaming, "Run! Run! Run!" on the radio, Thrash chose to stop and deploy the fire shelter he would die in. Eric Hipke ran around him and followed Haugh and Erickson up the hill. The
150 three-hundred-foot-high flames chasing them sounded like a river thundering over a waterfall. **G**

In his book *Young Men and Fire*, Norman Maclean writes that dying in a forest fire is actually like experiencing three deaths: first the failure of your legs as you run, then the scorching of your lungs, finally the burning of your body. That, roughly, is what happens to wood when it burns. Water is driven out by the heat; then gases are superheated inside the wood and ignited; finally, the cellulose is consumed. In the end nothing is left but carbon.

This process is usually a slow one, and fires that burn more than a few acres per hour are rare. The South Canyon fire, for example, only burned fifty acres in the first three days. So why did it suddenly rip through two thousand acres in a couple of hours? Why did one hillside explode in a chain reaction that was fast enough to catch birds in midair?

Fire typically spreads by slowly heating the fuel in front of it—first drying it, then igniting it. Usually, a walking pace will easily keep fire fighters ahead of this process. But sometimes a combination of wind, fuel, and terrain **conspires** to produce a blowup in which the fire explodes out of control. One explanation for why South Canyon blew up—and the one most popular in

G TAKE NOTES
Summarize what happened at about 4:00 P.M. Then add your summary to your timeline—in proper order.

an open flue. The powerful winds that hit around 4:00 P.M. blew the fire up the drainage at the hottest time of day. And turpines, having baked for hours, could **conceivably** have lit the whole hillside practically at once. **Ⓐ**

When Storm King blew, Haugh had to run 150 feet straight up a fire line with poor footing. Despite **rigorous** conditioning—he is a runner and
190 a bodybuilder—his heart rate shot through the roof and his adrenal glands dumped enough epinephrine⁸ into his system to kill a house cat. Behind him, sheets of flame were laid flat against the hillside by 50 mph winds. The inferno roared through inherently combustible vegetation that had been desiccated,⁹ first by drought, then by hot-air convection, finally by a small grass fire that flashed through a few days earlier. The moisture content of the fine dead fuels was later estimated to be as low as 2 or 3 percent—absolutely explosive. As Haugh ran, panicked shouts came over the tiny radio clipped to his vest for people to drop their equipment and flee. One brief thought flashed through his mind—“So this is what it’s like to run for your life”—and he didn’t think
200 again until he reached the ridgetop.

Above him, the BLM and upper Prineville crews had abandoned hope of reaching H-1 and scrambled toward H-2. When that route too was blocked, they turned and plunged over the ridge. Due south, one hundred feet below **Ⓐ** H-1, the eight smoke jumpers who had been ordered out by Don Mackey fifteen minutes earlier were crawling under their foil shelters to wait out the approaching fire storm. At Canyon Creek far below, a crew of fresh smoke jumpers who were preparing to hike in watched in horror as eight little silver squares appeared on the mountainside. Meanwhile, hidden from view by smoke, Mackey, the Prineville nine, and the three smoke jumpers were running
210 a race only one of them, Hipke, would win.

In the end twelve of the dead were found along the lower fire line. Prineville hotshot Scott Blecha had also run past Thrash but lost his race a hundred feet from the ridgeline. The rest were in two main groups below a tree—the tree, as it came to be known, where Haugh had started his run—a few clumped so close together that their bodies were actually touching. Only smoke jumpers Thrash and Roger Roth had deployed their shelters, but the blistering heat disintegrated the foil. Kathi Beck died alongside Thrash, partly under his shelter. It seemed that in his last agony, Thrash may have tried to pull her in. In addition, Richard Tyler and Robert Browning, two fire fighters deployed
220 earlier to direct helicopter operations, perished just north of H-2, only a few hundred feet from a rocky area that might have saved them. **Ⓐ**

The Prineville nine’s dash for safety ended after three hundred feet. They were caught just three or four seconds before Haugh himself cleared the ridgetop, and he could hear their screams over his radio. Reconstructing the details of the victims’ agonized last seconds would occupy many hours of professional counseling for the survivors.

8. **epinephrine**: another name for adrenaline, a natural chemical released by the body that speeds up heartbeats, improves breathing, and increases blood flow to muscles during exercise.

9. **desiccated**: thoroughly dried out.

H TAKE NOTES

Based on Junger’s explanation of superheating, what might have been happening for several hours before 4:00 P.M.? Indicate this possible occurrence on your timeline.

conceivably
(kən-sēv’ē-blē) *adv.*
possibly

rigorous (rĭg’er-əs) *adj.*
strict, uncompromising

Ⓐ GRAMMAR AND STYLE

Reread lines 201–203. Notice how Junger uses the adverb clause “When that route too was blocked” to describe at what point the Prineville crew plunged over the ridge. Adverb clauses help to add important details to writing, telling when or where something happened, for example.

Ⓐ PATTERNS OF ORGANIZATION

Why do you think Junger chose to present these details in spatial order?



A plane releasing fire retardant over a fire.

covered the quarter-mile slope in about two minutes, hitting its top speed of
270 18 mph in the dried-out Gambel oak.

The next question was why it had done that. Fire behavior is determined by an incredibly complicated interaction of fuel, terrain, and wind, and there are mathematical models describing the interaction. (The models are programmed into hand-held calculators carried by most incident commanders these days.) The deadly hillside faced west at a 33 to 50 percent slope, and the vegetation on it possessed burning characteristics described in a formula called Fuel Model Number Four. The moisture content of the small dead fuels on Storm King Mountain was around 3 percent. And the live Gambel oak (which had only been partly burned earlier) was several times drier than normal. In a light
280 wind, according to this model, those conditions would produce twenty-three-foot flames spreading at a maximum of seven hundred feet an hour.

That's a manageable fire, or at least one that can be outrun, but an increase in wind speed can change the situation dramatically. At 7:20 p.m. on Tuesday (less than twenty-four hours before the blowup), the National Weather Service issued a "Red Flag" fire warning for the area around Glenwood Springs. Dry thunderstorms were expected the following morning, followed by southwest winds gusting up to 30 mph. A cold front would come through sometime that afternoon, swinging the winds to the northwest.