

DISASTERS ON THE MOUNTAINS



**AS YOU READ,
THINK ABOUT:**

What makes avalanche country dangerous? How can skiers stay safe?

**NARRATIVE
NONFICTION**
Reads like fiction—
but it's all true

WHAT STARTED AS A PICTURE-PERFECT DAY TURNED
INTO A TERRIFYING NIGHTMARE WHEN TWO ALASKA
SKIERS TRIGGERED AN AVALANCHE **BY LAUREN TARSHIS**

WINTER MOUNTAIN

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THE
PAGE**
to read
more.



On a beautiful late-winter day in 2002, two experienced outdoorsmen set out for an afternoon of **backcountry** skiing in Alaska's Chugach State Park. This was wild country. There were no ski lifts, cozy lodges, or ski patrols. The two men—John Stroud and Skip Repetto—had enjoyed these majestic mountains many times before. They loved the thrill of skiing in the wild, surrounded by the rugged beauty of the Alaska wilderness.

What these two friends did not realize was that something deadly lurked just beneath the newly fallen snow. Had they looked hard enough, they would have recognized the danger—but the day was so serene, so beautiful, it was hard to imagine anything could go wrong.

The first run down the mountain was perfect, but at the end of the second run, Repetto felt something strange under his skis. The snow suddenly seemed unstable.

Alarmed, he shouted a warning to Stroud. But Stroud's dogs, which had come along to enjoy the splendid day, had already scampered into the valley, and Stroud had taken off after them.

Then Repetto heard an unforgettable sound.

Whumph!

In a split second, the mountain seemed to crumble. Tons of ice and snow peeled away from the slope and began a thunderous, crashing slide down the mountain. Anything and everything in its path would be buried: trees, boulders, animals, people.

Repetto stumbled and fell but managed to right himself in time to

escape. Stroud, however, was caught in a **gully**. He was helpless as the icy wave crashed around him, dragging him 500 feet. He clawed at the snow, desperate to stay on top, but the weight of his skis pulled him down. Within seconds, he was covered—first to his waist, then to his neck. Finally the snow closed in over his head.

Stroud was buried alive.

Warning Signs

Over the past decade, the number of people killed in avalanches each year has been slowly rising. In the 1990s, there were about 15 fatalities per year. Today, the average is 29.

One reason for the increase is that more resorts, from Colorado to Wyoming, have been opening the backcountry to adventurers. Indeed, more than 400,000 skiers are now heading into the backcountry every year. In these wild areas, there are no emergency crews, and the slopes are not maintained or supervised.

Most avalanche victims are outdoor enthusiasts like Stroud—



skiers, snowmobilers, and snowboarders. And like Stroud, most of them could have avoided catastrophe. That's because avalanches are not freak natural disasters, like earthquakes, that strike without warning. Most killer avalanches are triggered by their victims. Yet there are almost always clear warning signs.

Few people understand this better than Jill Fredston and her husband, Doug Fesler. Their hand-built house sits on a windswept mountainside that is a 45-minute drive from where Stroud and Repetto were caught.

From this base of operations, within sight of 95 **glaciers**, these two avalanche experts have studied snow the way medical students study the human body—from all angles, down to the tiniest parts. Snow is not just a solid sheet of white. It comprises microscopic

particles of water, air, and ice that bind together in intricate patterns, like lace. Why these particles stick together—and why they fall apart—is key to understanding avalanches. For example, if there is too much space between particles, the weight of just one person can cause an entire layer of snow to collapse.

That is exactly what happened to Stroud. His weight, and the weight of his two dogs, had triggered the avalanche.

To understand avalanches, Fredston and Fesler have also delved deep into Alaska's history. Fesler has spent dozens of hours in libraries poring over old newspaper articles and photographs, and has pieced together a vast history of avalanches over the past century. He has unearthed records of more

than 4,200 avalanches that have destroyed homes and killed animals and humans.

“Avalanche School”

As co-directors of the Alaska Mountain Safety Center, Fredston and Fesler have shared their knowledge with thousands of skiers, hikers, and snowmobilers. Their “avalanche school” teaches people how to recognize avalanche warning signs: Lots of fresh new snow, steep slopes, sudden weather changes, and high winds can all cause the **snowpack** to become unstable.

These and other dangerous conditions are often obvious, as though Mother Nature herself had posted warnings. Learning to look for these signs—and take them

seriously—is key to staying alive in the wilderness.

But many people ignore the warnings. In February 2012, seven extremely experienced skiers were caught in an avalanche in Washington's Tunnel Creek. Three were killed. The group knew the **terrain** well; they also knew they were skiing under prime avalanche conditions. Yet they went out anyway. Experts call this the “halo effect”: the skiers felt safe simply because they were experienced and had skied the area before.

Like the skiers in Tunnel Creek, Stroud and Repetto had attended avalanche school. They knew avalanches were common in Chugach State Park, particularly on bright, sunny days following heavy snowfall. They also



WHAT YOU NEED TO SAVE SOMEONE BURIED ALIVE



SHOVEL
for digging

BEACON for
locating a
person under
the snow

Avalanche safety gear like this can mean the difference between life and death. But some experts, like Jill Fredston, feel this gear creates a false sense of security. What's the use of a locator beacon if no one can get to you before you suffocate?

knew that colder, shadowed slopes are more avalanche prone. Yet just such a slope is where they ventured for their fateful ski run.

And then—*whumph!*—it was too late.

The avalanche buried Stroud so completely that he couldn't open his eyes. The snow around him was as hard as concrete.

He couldn't move, much less dig himself out. His mouth had filled with snow. Within moments, he started to suffocate. He thought about his dogs, wondering if they had survived. (Sadly, both his dogs were killed.) And then he resigned himself to the fact that he was going to die.

Repetto, meanwhile, was badly shaken, but he did not panic. He knew time was precious. He had to find his friend immediately.

Luckily, the two men had not trekked into the wilderness unprepared. They were both wearing beacons, small tracking devices designed for exactly this kind of emergency. Stroud had one strapped to his chest. Even as he was drifting toward death, his beacon was sending out a steady electronic signal.

Repetto switched his beacon to "receive." Within seconds, it began to flash red lights that directed him



Worst avalanche in U.S. history: On March 1, 1910, a 10-foot wall of snow, knocked loose by a lightning strike, swept into the town of Wellington in Washington State. It sent two trains crashing 150 feet down a steep ravine. Ninety-six people were killed.

to where Stroud was buried.

Repetto had other equipment to help him. His ski poles screwed together to form a probe. Rescuers use these slender, flexible poles to search through snow and debris for buried victims. After a few quick jabs into the snow, Repetto struck Stroud's back. Getting Stroud out, though, wouldn't be easy: He was trapped under four feet of snow.

A Dying Man

Strapped to Repetto's backpack was another piece of crucial emergency equipment: a light aluminum shovel. Repetto began to dig frantically, the snow piling up around him. After 10 minutes of exhausting work, he saw no sign of Stroud. Still, Repetto kept digging. He knew he had to create an airway for his friend as fast as possible. His arms ached. He was drenched in sweat. At last, he heard a noise—the rasping sounds of a dying man.

Repetto dug faster. He dug until the snow was chest-deep around him. He dug until he was too exhausted to dig, then he dug more until—finally—he saw Stroud's head.

Stroud wasn't breathing, and his face was blue. Repetto quickly scooped the snow out of his friend's mouth.

And then, to Repetto's relief,

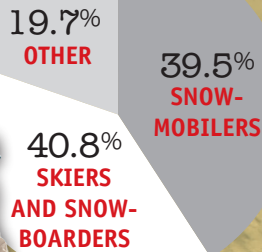
Stroud gasped for air. But he was in bad shape. It took 10 minutes for him to regain consciousness fully and another 20 minutes of digging for Repetto to free his body. If Repetto had arrived even one minute later, Stroud would have died.

In her critically acclaimed book *Snowstruck*, Fredston says that Stroud's story is typical except for one detail: He survived. The tragic truth of avalanches is that few people do. Fredston herself has unburied more than 40 victims, all dead. Most victims suffocate within 30 minutes of being buried. Others die during their terrifying tumbles down the mountain, as snow and debris knock their bodies around like rag dolls.

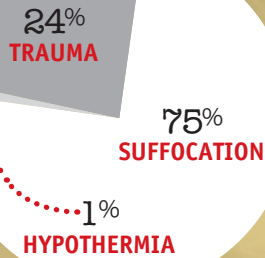
Yet the vast majority of these deaths could be prevented. "Nature sends out strong messages," Fredston says. "If only people would learn to listen." ●

AVALANCHES BY THE NUMBERS

Whom They Kill*



How They Kill



*2001-2011

\$1,179

The cost of a North Face avalanche air bag pack. Wearing an air bag can help prevent you from getting buried, and offers some protection from flying debris.



300

The speed at which an avalanche can travel in feet per second. That's the length of a football field every second.

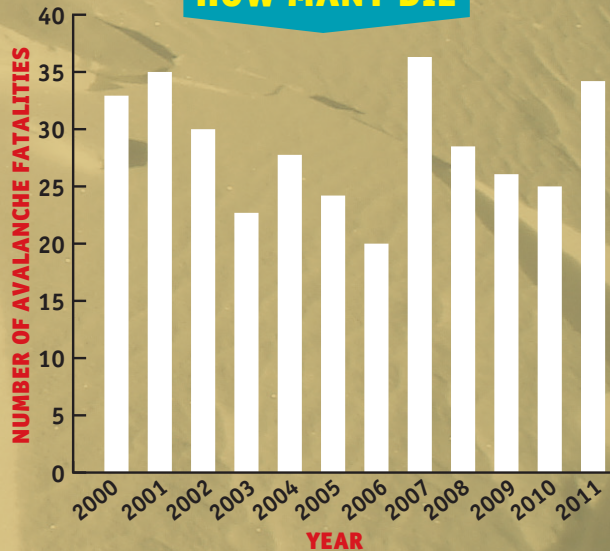


1962

The year of one of the deadliest avalanches ever recorded. It destroyed nine towns and seven villages in Peru, killing about 4,000 people.

AVALANCHES

HOW MANY DIE



SOURCE FOR STATISTICS: AMERICAN AVALANCHE ASSOCIATION

CONTEST

Write a Letter Imagine that your friend is taking a ski trip in avalanche country. Write a letter convincing him or her that avalanches pose a serious danger and offering advice on how to stay safe. Use details from the article and the infographic above to support your advice. Send your letter to **AVALANCHE CONTEST**. Five winners will each receive a copy of *Far North* by Will Hobbs. See page 2 for details.

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