



By Joe Albert

Wildfire

HEROES

When forests or grasslands go up in flames, these **firefighters** rush to help.

When you think of firefighters, you might picture them with fire engines, hoses, and long ladders, battling flames in a building or a house. But there are other firefighters called wildland firefighters who use very different equipment and techniques to battle blazes in wild places throughout Minnesota and beyond. They fight forest and grassland fires caused by things like lightning strikes and careless behavior, and they work to protect public land, private property, and people who could be in danger.

Some firefighters work on the ground near the fire as they try to put it out. Others fly in airplanes and helicopters as they work to extinguish the

flames, while still others are leaders who make decisions about how fires should be fought. Some firefighters work for the Department of Natural Resources, and some work for other government agencies, but they often work together. It takes a team effort to get a fire under control.

“You might think it’s all just dropping water on the flames,” says Brian Pisarek, who works as an incident commander on fires in Minnesota, which means he’s the boss. “But especially on the big fires, there are a whole bunch of people who come together” to complete the mission.

Here are stories about three different kinds of firefighters.

Wildland firefighters battle out-of-control blazes like the Palsburg Fire in northern Minnesota.

COURTESY OF TYLER FISH



An air tanker drops water on the Pagami Creek Fire in the Boundary Waters Canoe Area Wilderness.

Eye in the Sky

DNR pilot Luke Ettl flies an airplane that has all sorts of high-tech equipment to help him find his way through the air. But when he was sent in the summer of 2007 to fight a fire on the Gunflint Trail in northern Minnesota, he really didn't need this equipment. All he had to do was fly in the direction of the thick gray smoke that was billowing into the blue sky. Down below that smoke, flames were charting a path of destruction that would burn down 140 businesses, cabins, and homes and scorch more than 75,000 acres of land in Minnesota and Canada.

As Ettl drew nearer to the blaze, which

burned trees made dry by a summer-long drought, he knew this fire was by no means ordinary. Many of the fires Ettl fights can be extinguished within about a day, but it took many days and help from hundreds of firefighters to put out the Ham Lake Fire, which was started by a camper who left a fire unattended.

"I remember coming through the smoke and seeing some of the resorts and buildings on fire," he says. "It was kind of a helpless feeling. This vast landscape had changed into almost a moon-landscape environment, with trees burnt to ash and rocks showing."

But Ettl couldn't dwell on that feeling of helplessness, because he knew he had a job to do. With flames and smoke shooting skyward, Ettl positioned his airplane 1,500 feet above the ground to provide what he calls "airborne traffic control." Ettl serves as an eye in the sky to make sure the other firefighting airplanes and helicopters don't run into each other.

"It's a smoky and often confusing environment," Ettl says. "We fly our airplanes so we are above the air tankers, water scoopers, and helicopters. We can tell them where we want them to drop water and to keep those aircraft separated a safe distance from each other."

The plane Ettl flies has high-set wings that allow him to look down on the fire area. It can hold enough fuel to stay in the air for eight hours at a time. Even in the cockpit, the pilot can smell smoke, and the heat rising from the fire combined with the cooler air in the sky means that turbulence often shakes the plane.

The thick smoke of the Ham Lake Fire made it difficult to see the ground in some places, but Ettl and the firefighter in the seat next to him quickly fell into their routine. Radar equipment shows them where other planes and helicopters are flying, but their most important tools are their eyes and a radio headset that lets them communicate with the other pilots and with the firefighters who are battling the blaze from the ground. Because they have a bet-

ter view than anyone else, they can tell firefighters what's happening in front of them and where to go to fight the fire. They also coordinate the air attack, telling the pilots of other planes and helicopters where to drop water and chemicals called *flame retardants* that help put out fires.



DNR PHOTO



DNR PHOTO

DNR pilot Luke Ettl flies his airplane high above wildfires to serve as airborne traffic control.

The Ham Lake Fire is the largest one Ettl ever has fought, and it caused a lot of damage to human property. But thanks to the cool-headed work of firefighters and other emergency workers like him, the fire didn't kill or seriously injure anyone.



As an incident commander, Brian Pisarek (above) directs firefighting crews at the Pagami Creek Fire near the Boundary Waters Canoe Area Wilderness. He makes many important decisions each day and makes sure every firefighter makes it home safely.

Boundary Waters Blaze

Thunder boomed, rain fell, and lightning lit the angry sky as a thunderstorm raged in August 2011 near the Boundary Waters Canoe Area Wilderness in northern Minnesota. For days, nobody knew that one of

the lightning bolts had started a fire that would grow to become one of the largest wildfires in state history.

That changed on August 18, when fire managers became aware of the smolder-

ing fire in a *bog*, a wetland made up of mosses and dead plants that can burn under dry conditions. Hoping it would burn itself out, they monitored the fire for about a week. But suddenly nature unfurled a

perfect storm of conditions—low moisture and a strong north wind—and the fire jumped from the bog to nearby trees, spreading rapidly through the forest.

As the fire burned everything in its path, Brian Pisarek joined the effort to fight it. As an incident commander, Pisarek wasn't one of the firefighters on the front lines, but he was one of the leaders directing the effort. Everyone else fighting the fire reported to a team of incident commanders, including the people who make sure all of the firefighters get enough to eat, the people who figure out the best ways to fight the fire, and the people who put together written plans to fight fires.

"It's a lot of pressure," Pisarek says. Every day during a fire, he must constantly

PHOTOS COURTESY OF KARI GREER



By ground and air, firefighters battle the Pagami Creek Fire that was started by a lightning bolt in August 2011. Before it burned out, the blaze tore through 90,000 acres of land.

COURTESY OF KARI GREER

COURTESY OF MNICS

ask, “Is what we’re doing worth the risk we’re taking?”

Because the Boundary Waters is a wilderness area, far from roads and cities, it posed several risks and challenges. Many firefighters had to venture into remote areas to control the blaze and make sure campers and other people made it to safety. And because special rules apply in the wilderness, crews couldn’t use common pieces of firefighting equipment like bulldozers and flame retardants.

Wilderness rangers from the U.S. Forest Service, which manages the Boundary Waters, were sent into dangerous areas to make sure campers were safe and able to get out. Some of these rangers had a close call when shifting winds caused a fire to “run” toward them. They had to hunker down under *fire shelters*, tent-like foil structures that all wildland firefighters carry, to protect themselves from the racing flames. “Due to their training and quick actions, none of the wilderness rangers were injured,” the U.S. Forest Service told people after this close call.

As incident commander, Pisarek makes many important decisions each day. But to him, the most important thing is making sure every firefighter makes it home safely. Although the Pagami Creek Fire tore through about 90,000 acres of land before burning out, nobody was killed or seriously injured, meaning Pisarek considers the effort to fight it a success.



BOTTOM LEFT PHOTO COURTESY OF MNICS. ALL OTHER PHOTOS COURTESY OF KARI GREER.



DNR firefighter Meghan Ring (foreground) and her crew spent two weeks battling a blaze in British Columbia.

Traveling Firefighter

People who live in Williams Lake, a small city in the Canadian province of British Columbia, were on edge last summer. The area hadn't gotten much rain, and wildfires were burning throughout the drought-ravaged province. Conditions were ripe for a fire closer to town, and it seemed like just a matter of time before something provided the spark. That spark turned out to be a bolt of lightning, and it wasn't long before the rolling landscape was ablaze and many people were forced to leave their homes.

Because so many fires were burning in British Columbia at the time, the province's firefighters called for help. One of the crews that responded was from Minnesota and included Meghan Ring, who had been a DNR firefighter for about a year.

Ring and nine other Minnesota firefighters loaded their firefighting tools and gear into cars and vans and drove to Dryden, Ontario, where they boarded an airplane that took them to Williams Lake. Ring was surprised when she saw the dev-

astation the Spokin Lake Fire was causing as it threatened the town.

"It seemed like everywhere in British Columbia was on fire," Ring says. "All of the fuel—mainly aspen and spruce trees—was extremely dry, and the weather was warm. The fires were really active, and they would spread out and start up right before our eyes."

With flames all around, Ring and her crew spent several days putting out *hose lines*, which means they attached one fire hose to another around the perimeter of the 8,300-acre fire. After those lines are completed, firefighters can attach other hoses—known as *lateral hoses*—that allow them to spray water on the fire. Ring's crew also did other tasks, including searching among the rolling hills for *hotspots* and *flare-ups*, signs of potentially dangerous fire activity.

By the time Ring and her crew left the blaze, they were exhausted, having spent two weeks fighting it.


"Many more firefighters were coming in while we were preparing to go home," Ring says. "We were able to calm down the fire and make sure it was well contained. We did a good job when we were there."

While they were on the scene of the fire, Ring and her Minnesota crew teamed up with a fire crew from Ontario, another

PHOTOS COURTESY OF MEGHAN RING



A pump draws water from a wetland to fight a blaze in British Columbia.

Canadian province. This was the first time that firefighters from the state and province had worked together. It was also the first time that firefighters from Minnesota had been sent to British Columbia—and it probably won't be the last. 

TEACHERS RESOURCES

Find a Teachers Guide and other resources for this and other Young Naturalists stories at mndnr.gov/young_naturalists.

