



Fireweed, one of the plants that emerges after a wildfire.



Forest remains from the Excelsior fire of 2015.  
PHOTO: Gabrielle Lafrance

# Fire Loving Wildflowers

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Last summer, I had the privilege of living and working in Jasper National Park. Jasper, located on Treaty 6 and 8 territory and the traditional lands of the Anishinabe, Aseniwuche Winewak, Dene-zaa, Nēhiyawak, Secwépemc, Stoney Nakoda, Mountain Métis and Métis, holds a cherished place in the hearts of those who have spent time in this very special place. Known for its vast wilderness, majestic peaks and abundant wildlife, Jasper is home to outstanding natural beauty.

During the summer of 2024, due to a severe thunderstorm, wildfires swept through the park. I was in the backcountry then, and evacuated as flames encroached on the landscape I had come to love.

Jasper's landscape was already strained before the fires. The mountain pine beetle had devastated the forest, leaving behind deadfall.<sup>1</sup> Decades of fire suppression had allowed dense undergrowth to accumulate, creating conditions for more intense fires. It wasn't a matter of if wildfires would strike, it was a matter of when.

The fires in Jasper burned longer and hotter than they would have in a healthy forest. While forests are resilient, the increasing severity

of recent fire seasons are pushing them beyond what they are naturally equipped to recover from, raising concerns about long-term ecological shifts. Human activity and the effects of climate change, such as extreme temperatures and drought, have disrupted natural cycles, making fire seasons longer, more intense and closer to home than in years past.<sup>2</sup>

Certain forest ecosystems need occasional wildfires for renewal and to stimulate new growth: they are part of a healthy forest. Understanding how forests regenerate after fires can offer a glimmer of hope amid rapidly changing wildfire seasons. Let's explore what happens one hour, one day, one month and one year after a wildfire.

## One hour after the fire

In the immediate aftermath of a wildfire, the landscape is smouldering. The forest floor is coated in ash and the acrid scent of burnt vegetation lingers. Most plants have been scorched by the flames, leaving only charred trees standing. Larger animals have mostly made a run for it, while smaller animals hide underground or in sheltered places.

Even at this early stage, the groundwork for regeneration is being laid. Many coniferous trees, such as lodgepole pines and jack pines, have evolved serotinous cones that require fire to release their seeds. As the flames wither, these seeds are scattered across the charred soil, ready to sprout.<sup>3</sup>

**Gabrielle** (she/her) is beginning to harbour some regrets for not having studied environmental science. Lately, she's been taming watercolor, reading the works of Alan Watts and listening to Mac Demarco's '20221102 The Truth' on repeat.

## One day after the fire

Once a fire has swept through an area and is fully extinguished, subtle changes become apparent. The fire's heat has sterilized the top layer of soil, eliminating harmful pathogens and invasive species while leaving behind essential nutrients. Scavenger species, such as beetles and flies, move in to feed on the remains of plants and animals. These insects break down organic matter and accelerate decomposition.<sup>4</sup>

## One month after the fire

The forest shows signs of life. Grasses and shrubs begin to emerge. These plants thrive in open environments and play a vital role in stabilizing the soil. The tender green shoots of a regenerating forest support populations of bears, elk, moose and deer.

Insects proliferate, followed by the birds, rodents and other small animals that depend on them as a food source. Charred trunks of trees become habitat for the black-backed woodpecker. These birds locate burnt forests weeks to months after a fire and then live off the bounty of insects over the next five to eight years.<sup>5</sup>

## One year after the fire

The landscape looks dramatically different. Young saplings, particularly from fire-adapted species like lodgepole pines, begin forming the next incarnation of the forest. Thanks to increased soil fertility, the ground is teeming with fire-loving wildflowers. Red paintbrushes, wood lilies, calypso orchids, wild roses and the aptly named fireweed emerge alongside buffalo berries.<sup>6</sup> These berry-producing shrubs, which thrive after fires, are a vital food source for bears.

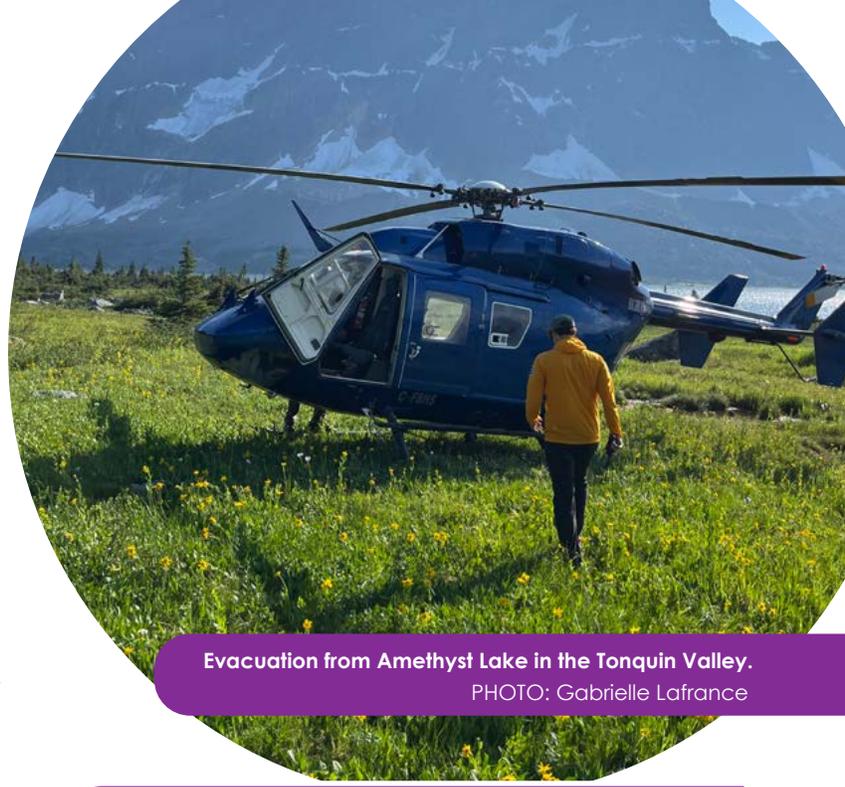
Wildlife populations have largely returned, and some species gain advantages from the altered habitat. Predatory birds, such as hawks and owls, benefit from the increased visibility and access to prey. Larger mammals like moose and bears have an easier time moving through the less densely forested areas.<sup>7</sup>

## Reflections on love and grief

It's hard to describe the human pain wildfires cause from the loss of life, homes and jobs. The devastation extends not only to the injured, displaced and diseased, but also to the firefighters and support teams who relentlessly battle the flames.

Watching flames consume the landscapes I loved filled me with a grief that I am still processing. Yet as I rode the evacuation vehicle to Edmonton and saw a herd of elk waiting at the fire's edge, I still felt that spark of amazement. Nature does not mourn like we do; perhaps it can't. It can only move forward. The elk knew that new life would emerge from the ashes, just as it always has.

My love for Jasper is intertwined with some of the most joyous moments of my life and my greatest challenge yet. Jasper's ability to heal after such devastation is a reminder of the incredible power of resilience, both in nature and in ourselves.



Evacuation from Amethyst Lake in the Tonquin Valley.

PHOTO: Gabrielle Lafrance

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