

Watching the Wildflowers

Climate change is forcing wildflowers to bloom earlier than ever before.

BY ALEX BRICKKOWSKI

Since the 1970s, western mountain wildflowers have been blooming an average of three weeks early, due to warming spring temperatures and earlier snowmelt. Hikers normally see the classic yellow arrowleaf balsamroot in June, for example, but its vibrant petals now wave at us mid-May.

“These changes are happening in our lifetime,” said Trevor Bloom, a botanist for the Bridger-Teton National Forest, “and at an alarming rate.”

During the last week of March, sagebrush buttercup, spring beauty, yellowbells, and sweet violet began pop-

ping up in Targhee National Forest—six weeks earlier than what was normal just nine years ago. Triggered by heat and sunlight, spring wildflowers have seen the biggest change in bloom time, flowering an average of 17, and up to 36, days early. Midsummer wildflowers, like lupine, paintbrush, and columbine, have been blooming around 10 days early; they are more attuned to the length of the day, which does not change year to year. While they’re still affected by these climatic changes, it’s less extreme than for the earlier-blooming flowers.

These early blooms cause problems for wildlife who depend on consistent plant growth for habitat and food. “Generally, land managers and scientists are concerned that there will be mismatches between flowering time and berry time, and the wildlife that depend on these plants for food,” said Jasmine Cutter, a Grand Teton National Park vegetation biologist. “If the plants are responding to environmental cues and animals are using photoperiod [day length], then there is concern that an animal, whether a bee or a bear, might show up and all the flowers have already bloomed or the shrubs have already dropped their berries.”

This summer, hikers are likely to hit dry trails in search of blooming flowers much earlier than they otherwise might. Bloom, the botanist, urges backpackers to pay particular attention this year (especially where lower mountain elevations received barely any snow) to notice the changes taking place right in front of us. This was the warmest (or equal to) winter on record across the West. Snowpacks, which provide critical water resources, never got above 50% of normal in many places, a severe and historic deficit.

“I urge people to get outside and notice the rhythms of life, notice the patterns and perhaps perceive the changes around us,” said Bloom.



▲ *When bloom times become out of sync with the patterns of pollinators and other wildlife, it’s called a phenological mismatch—something likely to occur this summer after a historically warm and dry winter across the mountain West.*

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