

SUMMER 2022 **NEWSLETTER**



What does climate change mean for wildflowers?

by Karin Teague

The one million dollar question! We know that climate change disproportionately affects alpine environments like that on Independence Pass. Temperatures in the Rockies have risen three and a half degrees Fahrenheit in the last seventy years.

Snowmelt is generally occurring earlier, and with it the first blooms of the year are coming out sooner.

If the wildflower season is starting earlier, does that mean it is winding up earlier? As temperatures rise, will shrubs and trees start to move up in elevation, potentially crowding out alpine flowers? Will alpine flowers, adapted for cold temperatures, wither in the heat, or flourish in their newfound banana belt? Who will be the winners, and who the losers?

These are just some of the questions that scientists and lay

wildflower-lovers alike are pondering, and which we hope to begin answering with our studies on Independence Pass.

Beginning in 2016, the Aspen Global Change Institute, Colorado Mountain College, and IPF launched a cover composition study near the summit of the Pass, where

AGCI maintains a soil moisture and weather monitoring station. In this study, which we conduct annually mid-July, we record the types and percentages of ground cover—including rock, bare ground, litter, and every species of plant—found in what's known as a Modified Whitaker Plot. Conducted on our

knees over many hours, it is painstaking, challenging work that we all look forward to!

In addition, 2022 marks IPF's third year studying wildflower phenology—the timing of biological events—along the Linkins Lake Trail. Every week throughout the summer we identify the wildflower species found in four plots along the trail, and count how many plants of each species are in bloom. Each plot represents a different elevation and microclimate. This study captures the timing of first, peak, and last flowering of each species, and what kind of year they are having.

Dwarf clover, Trifolium nanum



Old man of the mountain, Hymenoxis grandiflora

Wildflowers, continued from other side >

While we don't yet have enough years of data from these studies to identify trends or draw conclusions, our regular time in the field has led to some anecdotal observations.

First, with respect to the length of the wildflower season generally, much seems to depend on the summer rains that do or don't fall. Even in a year with a big, long-lasting snowpack like 2019, which led to an explosion of flowers when the snow finally melted in mid-July, when the summer monsoons didn't follow, the flowers closed up shop by mid-August. Conversely, summers that start hot and dry can see flowers linger into late August and September if summer rains come to the rescue.

What happens when they don't? Is there any downside to flowers blooming and going to seed earlier than in the past? Once again, the answer is, it depends. If the flowers' primary pollinators, such as bees or butterflies, don't respond to climate change in the same way as the flowers—if, for example, those pollinators arrive later than peak bloom—the flowers' reproductive success may suffer (along with the pollinators'.) Early blooming also puts flowers at risk of suffering a late frost, as we often see with fruit trees in the Roaring Fork Valley that then fail to produce fruit.

However, some studies suggest that the timing of snowmelt and the last spring frost are largely operating in parallel. As for pollinators, studies from the Rocky Mountain Biological Lab just to the south of us demonstrate significant variation in pollinator populations and responses to climate change from year to year.

Anecdotally speaking, it feels like pollinators, especially in the high alpine, are arriving late to the party. On July 27 of last year, I stood on top of 13,700' Mt. Champion and observed that while peak bloom on top was quite apparently over, with just a few species of Potentillas and Drabas hanging on, the insect activity was enormous—much greater than it had been back in June, when the alpine flowers were at their most numerous.

Does this mean we'll see reduced reproduction and fewer wildflowers in the years to come? Will the answer be, once again, it depends? Adding to the uncertainty, studies suggest that not only do individual species of flowers within the same genus respond differently to climate change and to the various environmental factors at work from year to year, but that differences exist among populations of species, among different plants within a population, and even among flowers on an individual plant!

Plainly we have much to learn before we can move from anecdotes to data-supported conclusions. In the meantime, we look forward to paying close attention to what the wildflowers have to teach us this summer, and if we are fortunate, for many summers to come.



Colorado columbine, *Aquilegia coerulea*Thanks to Hiromi Kondo for her work collecting the studies referenced in this article.

King "Woody" Woodward

Board member extraordinaire

By Gail Holstein

One of the first things people mention when they talk about Woody is his modesty.

For example, he has never wanted to be called by his given name, "King." Too imperious! He was lucky to have inherited the surname of Woodward.

Another word that often comes up around Woody is "classy." In a town populated by guys in ragged tee-shirts and torn jeans, he always manages to look pressed out. Mark Fuller, who until early 2015 was IPF's Executive Director, remembers that "in a town full of dirty longhairs, he looked like he had just stepped out of an Arrow Shirt commercial."

Most Aspenites – many of whom consider themselves "locals"—

arrived long after Woody came, in 1956. As Woody remembers it, "I arrived in Aspen on November the 15th, 1956. I had a job at the Hotel Jerome as a desk clerk. Two weeks before Christmas I broke my right leg skiing on Aspen Mountain. I was able to get to work but I was was not able to be a desk clerk. I became the telephone operator. It was bad for business to have a desk clerk with a broken leg."

Woody had many jobs: working at the Jerome and the Copper Kettle, teaching cross-country skiing at Ashcroft, managing the Aspen Meadows. In 1974 he was the go-to guy for any issues that might pop up after most Institute people had left for the winter. In 1975 he helped get the Kresge Building up and running.



Woody at the Grottos, photo Jennifer Woodward

His wife Anne was cool on the outside, competently managing apartments near today's City Market, but quite lively once she knew a person well. Woody recalls taking her camping one fall on Independence Pass, miles up pot-holed Lincoln Creek Road at the ghost town of Ruby. When an unexpected snowstorm arrived in the middle of the night, they had to get out of there fast. He figured that he'd never see her again after the ordeal. But – surprise! She married him anyway.

Woody's main interest is, and has long been, the Pass. He used to be the starter for the Ride for the Pass, scribbled board meeting minutes in pencil, and wrote wonderful thank-you notes to donors. A proud achievement was getting toilets installed at the summit.

At age 82 he spent ten hours re-

moving snow fences and loading them onto helicopters. The next day he told his son David, "I don't know why, but I'm a bit tired, and my knees hurt some."

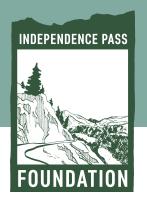
Woody finally resigned in 2021 – 32 years after the founding of IPF. "I have had a number of jobs of all types and have served on a number of boards. IPF was the best board I have ever been on." Woody said.

Today, at 93, Woody is as vital as ever. He keeps up with IPF matters by reading the director's weekly updates, and enjoys discussing anything Pass-related with board members and staff who drop by Whitcomb Terrace for visits.

When nominated for the Aspen Hall of Fame, he refused, saying he "didn't want all the fuss." That was just Woody being Woody.



IPF board and staff, 2015



2022 Summer / Fall Projects

New picnic tables for Discovery/Braille Trail Long winters and inevitable decay have finally

rendered the original, charming log tables at this popular picnic area unusable; they will be replaced with handsome, wheelchair-adapted tables made from recycled materials that will last for decades.



North summit trail reroute

IPF and the US Forest Service are exploring rerouting of the current network of steep, rutted, erosion-causing social trails heading north from the summit up to the prominent rock outcropping, in order to protect the fragile alpine tundra.



Wag Bags for climbers Modeling the highly successful waste-free campaign in Boulder, IPF will launch a "keep it clean" pilot project, stocking Wag Bags for human waste and TP at key climbing areas.



Linkins cabin restoration

IPF will conduct a structural assessment of the 1900s cabin across from the Linkins/upper Lost Man trailhead with the goal of shoring up and preserving this historically significant structure.



Mt. Massive Wilderness preservation IPF is supporting the work of the Wilderness Land Trust in transferring to the US Forest Service the last private inholding in the Mt. Massive Wilderness area, a 20-acre parcel below Blue Lake that intersects the North Fork Lake Creek Trail.





Lincoln Creek informational signage IPF will install near Grizzly Reservoir the second of two signs, which will educate visitors on road conditions, where it is permissible to camp, and how to be good stewards of the landscape.

Ecological studies

IPF will continue its studies of: (1) pikas, in partnership with the Colorado Pika Project; (2) forest health, including spruce and other beetle infestations; (3) the phenology and composition of wildflowers on Independence Pass; and (4) river health, including summer temperatures and algae buildup.



Linkins Lake trail project

For the fifth consecutive (and possibly final!) year, IPF, RFOV and the US Forest Service will return to Linkins Lake to protect wetlands and reduce the impacts of water runoff and human traffic on this popular, family-friendly trail.



Student tree plantings and restoration projects IPF will continue its decades-long relationship with schools from Glenwood to Aspen, planting native saplings throughout the corridor and removing metal debris from the Continental Divide.

Everything we do depends on you — thank you, generous donors!

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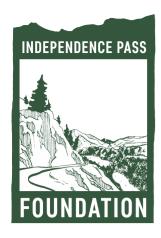
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"I return to the wilderness to remember what I have forgotten, that the world can be wholesome and beautiful, that the harmony and integrity of ecosystems at peace is a mirror to what we have lost."

- TERRY TEMPEST WILLIAMS

SUMMER 2022 Calendar

VOLUNTEER PROJECT

Wednesday, July 13 8:30am-noon meet at the winter gate

VOLUNTEER PROJECT

Wednesday, August 10 8:30am-noon meet at the winter gate

BOOK SIGNING PARTY

Wednesday, August 24

5-7pm

new edition of High Road to Aspen with Paul Andersen & David Hiser ACES

LINKINS LAKE TRAIL PROJECT

Sunday, August 28 8:30am-3pm meet at trailhead

The mission of the Independence Pass Foundation is to restore and protect the ecological, historical, and aesthetic integrity of the Independence Pass corridor and to encourage stewardship, safety, and appreciation of the Pass.