

# WINTER SCIENCE

## by Air

By Garrett Fisher  
Images by Garrett Fisher

I have for many years tried to properly explain and categorize Western winter, and I am still at a loss for words. On one hand, it is America's winter wonderland, our playground of snow sports, extreme cold, rough storms, and genuine risk from dangerous winter weather. On another hand, it can seem

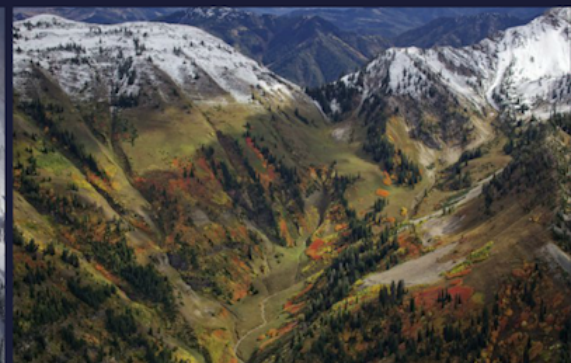
downright pleasant in Wyoming compared to lake effect winters near the Canadian border in New York, where I grew up. There is even a family from the Midwest in Alpine that enjoys coming to Wyoming to escape the miseries of winter.

I have come to appreciate that the duality of characteristics makes winter incredibly varied in Wyoming, leaving something to see and explore every time the weather changes.

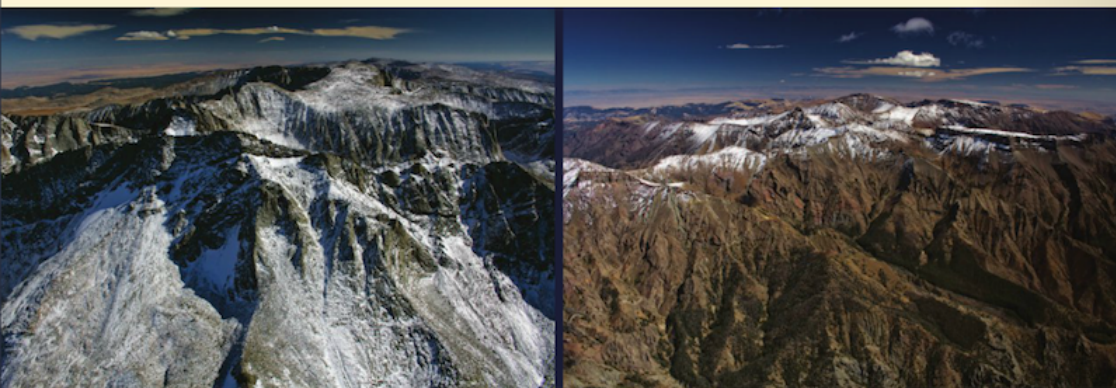
It is no mystery that the higher the terrain, the more snow falls. This maxim holds true in the entire Mountain Time zone, sometimes with differentials of snow being as varied as summits receiving six times the snowfall as neighboring valleys. Our land use patterns derived of homesteading mean that, for the most part, our towns, homes, and cities are located in sheltered valleys, with occasional passes that offer forays into alpine scenery that become worlds apart from day-to-day life below. Where the difference in the summer may be a hot day merely becoming warm or slightly cool at altitude, winter presents a dichotomy where it can be the difference between a blizzard and chilly day, sometimes life and death.

The problem is, I would actually like to *see* this activity, up close and personal, and am too uncompelled to ascend thousands of feet by foot each time to do so. It is one thing to know that the mountains have received their first snowfall at a distance. It is another to actually stand in the snow in September (or midsummer in exceptional circumstances) and take it all in.

The onset of winter, while autumn is in full force, has become my favorite time of year, largely because I can get close on a recurring basis with the airplane. Perpetually optimistic about temperature, I set off with a light coat, climb a few thousand feet, and cruise along whatever mountain range is the subject of my focus, snapping photographs of pronounced texture. In early season snowfalls, each rock and undulation of terrain is evident through light snowfall, as compared to midwinter and late spring, where snowpack is deeper and makes the appearance of the mountains smooth. Naturally, after a few hours of exposure to cold, flying with the door open for better photographs, my poor planning gets the best of me and its time to land in a hypothermic state.







Snow leaves behind a visual marker of geographic microclimates and the influence that terrain has on our weather. I have come to notice that Jackson Hole in the summer has more trees to the west and southwest, with just grass over the National Elk Refuge and points

north and east. After the first snowstorm of the year in the valley, it still surprised me that the western and southwestern sections of the valley had snow cover, whereas the Elk Refuge was dry. Could one thousand foot hills just to the west of town really block a snowstorm?

Logic would have it that the Salt River Range receives more snow than the Wyoming Range (as the Wyoming Range is to the east) yet after taking an April flight over the eastern edge of the Wyoming Range, seasonal snowpack was clearly deeper, likely a product of upslope snowfall coming in from low pressure zones in Colorado, feeding Gulf moisture that cannot make it any further west than that range.

Of course, Yellowstone tells its own story, showing off immense snowfall on the western and southwestern side of the park, with displays of rime ice crystals prevalent on western facing ascents and slopes, with snowfall rapidly trailing off as one descends to the northeast.

Curiosities abound with winter weather. One morning, I noted what appeared to be a fog bank sitting over the Palisade Reservoir, which is nothing terribly unusual on a cold morning any time of year. As the engine requires about 15 minutes to warm up in winter before takeoff, I decided that I had missed the boat. I had gotten up too late, and that was that. Two hours later, the "fog" was still there, and the light bulb went off in my head: "The cloud is forming

off of the warm waters of the lake." I warmed the plane up and took off, realizing within minutes that what I thought was happening was in fact correct: the little Palisade Reservoir was creating lake effect snow!

Billowing off late autumn warm waters, the lake was creating steam that was coalescing into clouds. Those clouds would then impact terrain, leaving a thick layer of rime ice as much as a half mile inland. I even decided to skim the top of the clouds, and there were sunlit ice crystals floating in the air all around the airplane. Now closer to the water, it was possible to see the steam literally floating off the surface of the water, eventually becoming an entire cloud and its own form of precipitation.

While most of society seems to come alive during the summer months, I crawl into a philosophical hole, hiding until the heat blows over and the rejuvenation of winter returns. To some it sounds strange; however, after each new step in the march toward the dead of winter arrives, I am out on foot or by plane checking it out, retracing my steps to see what is new and different, scenery around us clothed uniquely after each weather system. For the most part, I am remiss that winter ends, though I'd have to say that I do look forward to not freezing to death in the airplane. It has no functioning heat, not that it would matter much with the door and window open. WLM

*Garrett Fisher is the author of nine books, including Flying the Star Valley and Above the Summit: An Antique Airplane Conquers Colorado's Fourteeners (available on Amazon.com). He is in the process of publishing a long list of aerial photography books focused on the Rockies as seen from his antique airplane. Garrett blogs regularly about his aviation adventures at [www.garrettfisher.net](http://www.garrettfisher.net).*



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