

Weather Awareness

*Look to the Sky and Airwaves
To Avoid the Elemental Dangers*

BY
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Weather is beautiful. Weather is savage. Weather is thrilling. Weather is life-threatening. Above all, weather is largely indifferent to our existence. Mountain biking in the backcountry gives us a good chance to revel in the delights of our atmosphere, as long as we anticipate and cope with its threats.

In my neck of the woods, the Colorado Rockies, the wilderness seems benign. Poisonous snakes don't like the cool temperatures. The grizzly bear has been tragically eradicated. Bugs are inconsequential. Backwoods crime is almost unheard of. In Colorado, therefore, the primary problem in mastering the wilderness is coping with the weather. This can also be true in other parts of the country—sometimes when you least expect it....

Lightning Strikes!

Sky bolts are a summer problem nationwide, but in Colorado we get more than any place except central Florida. Lightning is a special threat to mountain bikers because our metal vehicle con-

ducts the electricity on its way to the ground. This fact has delivered some of the scariest moments of my life. Several times while trying to outride a storm, bolts struck so close that the thunder exploded simultaneously with the flash. I'm still alive because I took the proper action: I jumped off my 18-speed lightning rod and ran downhill.

Lightning always looks for the shortest path to the earth, which means you must avoid high ground or isolated trees. Whenever lightning is possible, it's wise to scan the horizon before venturing into an elevated, open area. Are those towering, dark cumulonimbus clouds moving toward or away from you? If toward you, find a lower route or wait out the storm. Summer showers often pass in just half an hour.

The Big Picture

I guarantee you'll enjoy mountain biking more if you pause to watch the sky a little closer and are attentive to weather reports. This awareness of the grand patterns can really pay off in spring and fall when big cyclonic low-pressure cells race across the continent, sometimes bringing continuous rain (and high winds or tornadoes) for days.

The sky can yield numerous clues to the future. For example, events in the upper atmosphere, where clouds are thin and wispy and jet aircraft leave contrails, can foretell weather in the next 48 hours.

Consider this weather pattern:

It dawns clear, inviting you to venture into the backcountry to enjoy a day of riding. By 10 a.m. you notice cirrus clouds forming. By noon they cover half the sky. By 4 p.m. a broad sheet of cirrocumulus partially obscures the sun; the sky has turned from blue to white. At sunset the high cloud deck is set aflame by an orange sun shining from below the horizon.

This sequence warns of an approaching warm front that could bring hours of rain beginning the next afternoon. I'd lay odds that tomorrow will dawn with altocumulus clouds covering the sky. These will yield to stratus by noon and rain-bearing nimbus by three. Rain will continue all night.

How do I know this? I learned it from *Weather: A Guide to Phenomena and Forecasts*, by Paul E. Lehr and R. Will Burnett (a Golden Nature Guide from Golden Press). It's an entertaining little book on a tremendously important aspect of our lives. And for more in-depth study, consider these two volumes:

A Field Guide to the Atmosphere, by Vincent J. Schaefer and John A. Day, part of the Peterson Field Guide series. This book excels at explaining cloud types and the wonderfully varied patterns we see in the sky. It's loaded with photos, and the authors provide solid interpretations of every observation.

Weathering the Wilderness, by William Reifsnyder, a Sierra Club volume. The strength of this book is its temperature tables, sunshine and precipitation information, and common storm patterns. It's organized by region.

With a basic understanding of the clouds and weather information sources, you won't be surprised and endangered by storms.



A college-level introductory textbook on weather will make everything in the field guides and media reports far more understandable. Check your local college bookstore for *The Atmosphere: An Introduction to Meteorology* (4th edition) from Prentice Hall.

Forecasting Services

In this day of satellites and instant, global communication, the electronic media, especially television, provide the best weather information. Observations of cirrus clouds are fun and often provide useful knowledge, but they don't answer the critical questions: Will the wind blow hard and long enough to make my bike ride miserable? Will it stay cloudy for days, or will the front pass quickly? How extensive is the precipitation field?

Weather forecasting grows more accurate as increasingly powerful computers amass and assess greater amounts of data worldwide. So I pay attention to the judgments of these professional forecasters:

• **National Weather Service (NWS).** It issues several forecasts each day for regions in every state. Within a given region, however, terrain differences create microclimate variations. For example, the NWS Colorado Zone 4 forecast, "Central Mountains," includes Aspen, Crested

Butte, and Leadville. Aspen gets more snow when the wind is out of the northwest. Crested Butte does better (we like snow) with the wind out of west-southwest. Leadville is on the other side of the Continental Divide and rarely gets as much snow as the rest of the zone. Thousand-foot elevation differences between each town create temperature variations of 3–5 degrees.

• **The Weather Channel.** Available only to cable TV viewers, it offers moving satellite videos several times each hour. The company's on-screen personalities have good weather understanding and often try to explain complex weather topics. The display maps are above average. Approximately every seven minutes the program broadcasts the NWS zone forecast.

• **A.M. Weather.** This 15-minute TV program from the Public Broadcasting System airs Monday through Friday at 6 or 6:15 a.m. Despite its brevity, it provides a comprehensive picture of the weather in the lower 48 states.

• **Television News.** Commercial TV broadcasters provide minimal explanation but use fantastic tools. The best is satellite imagery, especially the moving, 24-hour time-lapse videos with computer color enhancement. These can provide more information than any map or most forecasts.

• **NOAA Weather Radio.** The NWS operates this radio network to broadcast local weather forecasts and information 24 hours a day. It's particularly useful for updates on the approach of severe weather, such as tornadoes, hurricanes, or blizzards. It uses high-frequency AM channels for which a special, inexpensive radio is required. Before buying one at your local radio/electronics store, be certain that NOAA broadcasts in your area.

• **Newspapers.** Published forecasts are too infrequent, but at least you get some hard copy to study and think about.

• **On-Line Bulletin Boards.** With a personal computer and modem you can access local zone forecasts from CompuServe or other information services. Some cities have weather bulletin boards with an array of auxiliary information products. You can also subscribe to commercial weather computer systems, such as Accu-Weather in State College, Pennsylvania, or Weather Bank in Salt Lake City.

In addition to all of these professional forecasters, I pay attention to my eyes, ears, nose, mouth, and skin. Electronics can never substitute for personal observations and conversations with locals. Our senses are a key to the enjoyment and understanding of our common heritage—the atmosphere. ►