

THE HUMAN DRAMA OF WEATHER

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Bernard Mergen. *Weather Matters: An American Cultural History since 1900.* Lawrence: University Press of Kansas, 2008. ix + 398 pp. Figures, notes, bibliography, and index. \$34.95.

Thomas Neil Knowles. *Category 5: The 1935 Labor Day Hurricane.* Tallahassee: University Press of Florida, 2009. x + 350 pp. Figures, maps, exhibits, bibliography, and index. \$29.95.

Hurricane Katrina, which hit New Orleans on August 28, 2005, remains a stark reminder that weather—in this case severe weather—is not simply a natural phenomenon. The role of technology and science, local and federal government responsibility, social and racial inequities, and personal sacrifice, as well as compassion, are as central to the event as the rains and high water. Weather, from the most devastating storm to the most ordinary sunny day, is not only a natural but also a deeply cultural, social, and political event. Global warming is another vital case in point. Its human and natural causes and their impacts are intertwined. To paraphrase Raymond Williams' famous quotation about nature, weather contains, though often unnoticed, an extraordinary amount of human history (1980). The best studies of weather, therefore, not only reveal something about the climate but also about how people think about and react to their environment and to each other.

None of us can ignore the weather. Or we do so at our own peril. People often make the most prosaic choices (what to wear and when to vacation) as well as the most significant life decisions (where to live and work) based on the weather. People often use the weather to define a sense of identity. Many residents of the U.S. Northern Rockies, for example, have taken pride in their inclement winter weather as a source of strength, which they transform into a sense of regional pride. Think Miami, Los Angeles, or the entire state of Maine. Studies of weather are some of the most powerful environmental histories because, when done well, they can show us how profoundly the environment factors into the shape and function of societies and cultures.

Whether because of familiarity with one's locale, folk belief, or even arthritis, many feel they can predict the weather as well, if not better, than the

professionals. Sailors may rely on the latest equipment to track a storm front in their path, but they also know that the storm could defy any predictions. The experts' fluctuating rates of accuracy have perhaps contributed to this tradition. Will it rain or not? The history of weather forecasting has tended to pit the authority of science against both common knowledge and religious faith. As we seek the causes of weather disasters, we engage in debates on individual, professional, and governmental blame and responsibility. Just as any good environmental history is about much more than environment, weather history should be about a lot more than weather. And it should be interdisciplinary. The most interesting works in the genre reveal underlying tensions and connections among topics within art, science, religion, and public policy (to name just a few disciplines), which are not visible when one examines the topics in isolation from one another.

A good history of weather, in sum, should tell us quite a lot about how weather shapes people and how people shape the weather. It should analyze, too, the intersection of ideas and materiality. There are, in fact, a number of wonderful books on the weather. Some of the books that have done all this best are not explicitly about weather. Some are not overtly scholarly. For example, Donald Worster's *Dust Bowl: The Southern Plains in the 1930s* (1989) is a classic work in the fields of American environmental and agricultural history that convincingly argues that the era's devastating dust storms were not simply a natural disaster but a consequence of capitalist modes of agricultural production. And urban histories, such as Mike Davis' *Ecology of Fear: Los Angeles and the Imagination of Disaster* (1998) and John McPhee's "L.A. Against the Mountains" in his anthology *Control of Nature* (1989), chronicle with engaging detail the dual human and natural forces that have generated the city's devastating fires and mudslides. Many outdoor adventure stories, such as Jon Krakauer's *Into the Wild* (1995), powerfully convey the tragic results of a simultaneous lack of knowledge and a surfeit of romanticism about extreme weather conditions in places like Alaska.

Within the genre of books that are explicitly about weather in American history, many have tended to read like a catalog of anecdotes about weather phenomena through time. A few, though, have synthesized vast and varied source materials to deliver a compelling narrative and powerful analysis. The best works include William Meyer's *Americans and their Weather* (2000), David Laskin's *Braving the Elements* (1996), and especially Andrew Ross' essay, "Drought This Time," in his collection *Strange Weather: Culture, Science, and Technology in the Age of Limits* (1991). And if you are simply looking for a great source that documents first-person accounts of historic weather conditions and events from the colonial times through the late-twentieth century, you will do well to turn to David M. Ludlum's *The Weather Factor* (1984).

Two recent books enrich this genre, using radically different approaches. Bernard Mergen's *Weather Matters: An American Cultural History since 1900* is a sweeping cultural history of weather in the twentieth century, and Thomas Neil Knowles' *Category 5: The 1935 Labor Day Hurricane* focuses on a specific storm that struck the Florida Keys. Both are meticulously researched. However, neither offers the kind of powerful interdisciplinary analysis that can move weather to the center of historical inquiry.

In *Weather Matters*, Bernard Mergen expands upon his earlier *Snow in America* (1999) and creates a broad and comprehensive overview of the many ways Americans have thought about, depicted, and managed the weather. The book is organized topically. He examines the comparative use of science and art to interpret weather, the relationships between trained scientists and novice weather observers who have long played a vital role in weather reporting, and the use of meteorological information as a form of political or economic power.

In chapter one, Mergen examines folk and expert terminology to describe the weather, the development of scientific and vernacular ways to predict and forecast weather, and the ways Americans have related to weather via their religious beliefs and through humor. In the second chapter, he continues his exploration of the meteorological professions and looks especially closely at the U.S. Weather Bureau and American Meteorological Association. He discusses scientific innovations and the growth of government bureaucracies alongside rising market interests, such as real estate developers and technology companies, which have sought profits from the wind, rain, and sun. In this chapter, he also chronicles the rise of print, radio, and TV weather reporting.

The third and fourth chapters focus more on weather phenomena themselves and on how Americans have observed and recorded them in everything from cloud classification systems to whimsical works of fine art. The final chapter examines how Americans have dealt with both extreme and everyday weather, and it touches on topics as diverse as climate control, storm chasers, and the impact of weather on migraines. Mergen provides an insightful critique of the different ways scientists, the media, politicians, and residents talked about Katrina, including debates over who and what was to blame for the hurricane's devastation. Embedded in these conflicting stories and interpretations of this particular "natural" disaster, as Mergen points out, are deeper struggles over the meaning of nature and competing ideas about who has the authority and responsibility to manage it. He makes the interesting point that weather's unpredictability challenges and disrupts the legitimacy of established political and cultural institutions, as we saw first-hand in the aftermath of Katrina.

If the outline above is hard to follow, though, it reflects the troubles with the book—and with its organization. As noted, one of the greatest attributes

of *Weather Matters* is the tremendous amount of material the author covers, and the vast and varied source materials he draws on: American Meteorological Society bulletins, U.S. Department of Agricultural yearbooks, Farm Security Administration photographs, poems by Walt Whitman and Elizabeth Madox Roberts, episodes of the Weather Channel, songs by Woody Guthrie, the movies "Twister" and "Groundhog Day," and a first-hand day-by-day account of a storm chasing excursion. However, instead of weaving together one powerful narrative that analyzes interconnections, Mergen divides each chapter into separate topical headings. As a result, the book reads like a catalog in places, especially in the chapters featuring art and literature. He divides these chapters by form of material and by subject matter, so that the one on "Seeing Weather" contains separate sections on photography, film, and paintings. The poetry section in the chapter on literature moves from poems about rain, to clouds, to snow. And yet, how do these diverse cultural and natural phenomena inform each other?

Likewise, Mergen claims that the language and images reveal broader ideas about nature and reflect a sense of American identity. He states, "weather is part of a national discourse on American identity—spiritual, regional, psychological, and political—and . . . weather links the meteorologist and the artist in their efforts to understand order and chaos in nature" (p. 194). Absolutely. Yet I had difficulty seeing how, precisely, science and art as bodies of knowledge do intersect, and how these connections change over time—and how, exactly, Mergen defines American identity.

While his assertion of the connections between art and science are intriguing, the topical organization ensures that the analysis here is seriously underdeveloped. We do not understand, for example, how scientific and technological advances in defining what a cloud is, exactly, have impacted how artists and writers have visualized and talked about clouds. Readers will find this kind of close analysis for individual works of art or literature, such as in the interpretation of Jay Parini's 1973 poem "Mizzle," where Mergen notes how the poet describes the ecological process of forest decay. Yet what is missing is an overall analytical structure that explains how poetry has shaped the sciences, and how the sciences have shaped the business of weather, and vice versa, over time. I was disappointed that he did not weave together more the rich, varied, and extensive source materials he gathered.

Finally, as he discusses each topic separately, Mergen often skips swiftly from one moment in time to another, making the chronicle often seem ahistorical. For example, when discussing the interactions between scientists and volunteer observers, he jumps from the 1890s to the 1920s to 2005 and back to the early 1900s in less than a page. How did the relationships change over time—with the invention, for example, of new technologies and media outlets? These shortcomings do not diminish the great value of *Weather Matters*,

which I recommend as a comprehensive source for the history of weather in the twentieth century. However, Mergen misses the opportunity to create a truly interdisciplinary history.

Whereas Mergen takes a sweeping approach, Knowles delves intensely into one storm at one moment in time: the hurricane that wreaked havoc on southern Florida over Labor Day weekend in 1935. Also drawing on extensive research, he documents in intricate and riveting detail the storm's build-up, occurrence and aftermath, and the many lives it affected. Unlike Mergen's book, this one spins a compelling narrative. It, too, lacks analysis, but less because it is too encyclopedic and more because it is so focused on the specifics of the event. Knowles—whom the book jacket identifies as a fourth-generation resident of Key West and a retiree from Florida State University—still makes a valuable contribution. His in-depth case study is an excellent source for historians who wish to place storms such as Katrina within a larger historical sweep and broader analytical context.

Knowles has compiled oral histories, eyewitness accounts, private and institutional archives, maps, and photographs to tell the story of the storm itself and the people who monitored, lived through, and died in it. By including details about marriages, family businesses, regional shippers and their passengers, and the meteorologists working at the Weather Bureau, he paints a vibrant portrait of both the local community and the larger economic, scientific, and government forces that shaped and influenced it.

He divides the book into twenty-one short chapters and begins by introducing the main characters—which include weathermen, residents, vacationers, ship captains, and one of the most poignant groups to be impacted by the storm: a group of unemployed World War I veterans who were sent to the Florida Keys as part of a government work construction project less than a year before the storm hit. The main body of the book narrates the daily changes in the storm's development leading up to its climax as a Stage 5 hurricane, the efforts of the weathermen to track and publicize it, and the reactions of residents and those at sea who encountered it. Ernest Hemingway even makes a cameo appearance as one of the rescuers.

In recounting the storm surge, Knowles states: "Homes that had withstood the fury of the wind were wrenched off their foundations, boats were pulled out of their moorings, and metal tanks and drums popped loose from brackets, shooting upward like rockets to the surface" (p. 170). At the height of the storm, the water reached eighteen feet above sea level, inundating the islands and toppling a train that was attempting to cross to the mainland in order to bring people to safety. The storm caused the loss of 485 lives and inflicted six million dollars' worth of property damage (pp. 289–90).

As Knowles leads the reader through the storm's development, we see the different social and cultural factors that will become critical to assigning blame

for such great loss of life and property in the storm's immediate aftermath, as well as to interpreting the responses to the storm as we look back at it. Scientific, technological, and economic concerns influenced not only how the Weather Bureau meteorologists discerned the weather patterns but also when they decided to declare an evacuation—a decision not easily made on one of the resort's biggest holiday weekends. Government bureaucracy came into play when the regional Weather Bureau office in Miami had to funnel their reports through Washington, D.C., instead of directly to the local community, which caused delays in public announcements. Individuals often flouted the authorities, as people based decisions to stay or leave on their personal experiences living on the islands, on economic considerations, and even on love. (One young woman died in the hurricane because she chose to accompany her boyfriend on the ill-fated train.)

Still, the reader might fail to recognize the larger significance of these stories, since Knowles does not himself frame them within any larger analytical context. The book also marginalizes African Americans, who, in contrast to nearly all of the white actors, are often left unnamed and appear peripheral to the story. (Latinos are not specifically mentioned at all.) It is unclear whether this treatment is due to lack of sources or not, but it does make one wonder how considering *all* the actors who were involved might change the story. Another minor but disconcerting feature of the book is that it does not include footnotes, although the author states in the preface that a complete list of the sources is available at a local Key West library.

Not that you'll necessarily be tempted to stop reading. Along with the rich and emotional stories of those who survived and those who did not, the most compelling part of the book is the story of the storm's aftermath, when the federal government, the meteorological community, and the media confronted the issue of who was culpable for what happened and who should take responsibility for the recovery. As Knowles explains, the hurricane was considered an act of God, and a Congressional investigation determined that neither the Weather Bureau nor the federal government was to blame for the casualties and destruction; the government did, however, establish a fund to help the surviving veterans. (Of the 696 veterans working on the Keys, 132 were deemed missing or dead.)

Although Knowles does not raise the specter of Katrina and was under no obligation to draw the linkages, one cannot help but do it oneself. Yet it is characteristic of the book that readers must make these kinds of broader connections and find the storm's deeper meanings. And what, you might find yourself asking, marks the 1935 hurricane as an event of 1935—and not of 2005 or 1885? While *Category 5* offers a more gripping saga than *Weather Matters*, it unfortunately does no better at getting at the larger import of weather events in American history.

While peeking out the window to check the sky for rain or listening to local weather reports might seem innocuous, both *Weather Matters* and *Category 5* at least strongly imply that these seemingly simple daily acts and encounters with nature have deep social and cultural meanings. While their lack of analysis might leave you dissatisfied, both books unearth enormous amounts of material that provide valuable insights into the centrality to history of the wind, the rain, and the sun.

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