

## **Rain**

A Natural and Cultural History

Cynthia Barnett

Crown Publishing, 355 pp.

Through ever-evolving geological conditions, rainfall has been both our worst enemy as well as a saving grace. And in this tumultuous time of water scarcity and the attendant consequences on man and nature, environmental journalist Cynthia Barnett's book offers an interesting perspective of the impact of rainfall throughout the ages.

There are a number of compelling reasons why *Rain* - the book - is worth the read. Because it is both a natural and cultural history, Barnett takes great care to document the relationship between mankind and rainfall: whole societies caught up in the ritual cycle of praying/supplicating for rain; passing on folktales for eons that purport to explain seasonal change; and extreme measures utilized to stop unbridled torrents of rainfall. Then there is the scientific analysis of rainfall patterns spurred by climate change.

Barnett starts *Rain* off with of all things, the account of author Ray Bradbury and his placement of rainfall on Mars in *The Martian Chronicles*. She notes that in all probability, Venus, Mars, and Earth all boasted a wet and watery climate in formative times. Barnett notes that the earliest rains were the most violent and cooled the earth following the Hadean period when the earth was a hot, molten mass some 8,000 degrees Celsius.

Rain fell only partly to the ground, trapped in heavy clouds. When earth finally cooled to a manageable temperature, the planet was plagued with a devastating series of intermittent storms over a few thousand years. Stanford geochemistry professor Donald Lowe likened these first rains to the gullywashes of southern Louisiana that today cause motorists to take cover at the sides of roads to wait out the deluge.

As we have found in other studies of environmental self-preservation, rainfall has always been a crucial healing agent and life preserver. Rain brightens the natural world, helps plants to pollinate, grows crops, and shaped migration patterns as humans evolved to homo sapiens and figured out how to follow rainfall patterns as hunter-gatherers.

Rainfall has influenced the outcome of war. Bennett cites Victor Hugo's musing in *Les Miserables* that muddying rains allowed Prussian troops to regroup and hand Napoleon the defeat at the Battle of Waterloo that ended France's status as a world superpower.

Rain on Election Day has influenced more than one major political races. Here she cites Florida voter turnout in Bush v. Gore.

Rainfall's presence/absence in civilization building is compelling. The Akkadian Sargon the Great and his forebears built the first recognized empire at the headwaters of the Tigris and Euphrates rivers in Mesopotamia. The Akkadians built great structures, established a rule of law, and thrived in a commerce and agrarian-based civilization.

The Akkadian model in locating their cultural hub on or near a major water source has been replicated through time either consciously or based on common logic. In Pharaoh's vast, arid Egypt, ninety percent of the population lived within ten miles of the banks of the Nile River.

Bennett cites the deadly impact that rainstorms play in a variety of weather conditions. While rainfall is a factor, wind and tidal surge are the greatest contributors to death and destruction – as evidenced by the half a million people who died in the Great Bhola Cyclone of 1970 in Bangladesh.

The byproducts of slowly developing, yet lingering rainfall are devastating. One need only cite the after-effect of disease-bearing mosquitoes, mold, and rot in the buildings in post-Katrina Louisiana and Mississippi.

Bennett notes the symbolism of heavy weather in Albrecht Durer's fifteenth-century woodcut *The Four Horsemen of the Apocalypse* (Death, Famine, War, and Plague/Pestilence). The Horsemen are framed by foreboding storm clouds, a representation of one of the most devastating periods of continuous rainfall in history that left Medieval Europe wasted.

She cites changing rainfall patterns as among the earliest and most obvious tremors of a warming globe. The Intergovernmental Panel on Climate Change stresses that extreme rain events are already increasing in North America and Europe.

The questions about how much additional water vapor will fill the atmosphere and the resulting consequences are both unsettling and unsettled. She cites scientific opinion that the increase in water vapor in the atmosphere could double the greenhouse effect caused by carbon dioxide and ultimately create a "runaway greenhouse".

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