

Book Reviews



ENVIRONMENT

A SUGAR CREEK CHRONICLE: Observing Climate Change from a Midwestern Woodland by Cornelia F. Mutel. Iowa City, IA: University of Iowa Press, 2016. 251 pages. Paperback; \$14.40. ISBN: 9781609383961.

Have you had the unfortunate experience of having friends or family members learn of a medical condition that had existed long before the symptoms became apparent? How often have we commented on how well a person looked who really was very ill? Have you ever ignored medical symptoms, wishfully hoping it was not anything serious and would resolve itself without intervention?

What if you discovered that the environment in which you lived and loved was changing in gradual and subtle ways and realized that wishful thinking would not make it better? Would you be moved to speak out?

Cornelia Mutel studied the reports on climate change so she could ably edit a report on climate change effects in Iowa. She was profoundly moved by her research, coupled with changes she was seeing in her woodland, and she felt compelled to use her voice to address the issue. As an ecologist and senior science writer, she has the ability to write a book about what she learned and make that book accessible to people with little science background. Through the use of a monthly journal, we accompany Cornelia on walks through her woodland and experience with her the changes she saw taking place as a result of the extreme weather conditions that existed in Iowa during 2013. As an ecologist, she is able to point out the changes that occurred and speculate whether these were the vague symptoms of climate change.

The science of climate change is not easy reading nor readily understood by people outside the field. Mutel took an interesting approach: sharing with us a year-long journal that she wrote for her granddaughter about a woodland in which she lives, describing its ecology and natural history. Throughout this journal, she gently introduces the process of climate change by describing the changes in her woodland alongside weather events of the year. Using this approach, she shows what we might expect in a future when greenhouse gases reach a level that causes irreversible changes to our environment. To be clear, she notes that weather events described in her journal are best called weather and not climate change, but these weather events may already be influenced by climate change. If the extreme weather in 2013, in Iowa, gives us a sense of the change that could take place because

of the rising heat energy in the atmosphere, it may be a way to understand the future impact of climate change. Mutel also shared personal life-changing problems that, by analogy, provide a unique way of understanding the insidious changes that are taking place.

As a reader, I was drawn into the gentleness of the book. Thinking of the effects of climate change are overwhelming for me. The future is a scary dwelling place for my mind. I am too old to see what will happen, but my grandchildren and their children will live in this changing world and it frightens me. I have read and studied scientific articles about the topic and am convinced that we are heading in a bad direction. The general warming trend is caused by human-induced increases in greenhouse gases. We have had other warm periods in the life of the earth and high CO₂ levels, but never when the earth was the home to almost 8 billion people. We all have heard about the future ramifications of this increased heat energy in the environment. Yet we do not seem to be moved by the probability of an increased frequency of extreme weather events, challenges to world food security, weather patterns that will amplify droughts that are already persistent in many areas of the world, rising sea levels that will cause mass migrations of the majority of the world's population that lives near ocean coasts, all creating world competition for space, water, and food leading to severe political unrest. Why don't we seem to care? Is it because we are told over and over that climate change is a hoax?

In 2016, the year of a national election, I saw the issue of climate change denied, ignored, and obfuscated. The general public does not know what to think. The science is hard to understand. So it takes a gentle but firm hand to introduce a nonscientific audience to the ramifications of heating the earth's atmosphere by what most would consider an insignificant change in temperature of a few degrees and to help them understand that this heating is caused primarily by greenhouse gases emitted through human activity.

My visits to national parks have always been invigorated by the lectures and tours provided by the park rangers. So, going on walks with Mutel through her journal descriptions of her woodland was a pleasure. I wanted to be there with her through the four seasons she beautifully described so that I could learn about her unique natural world. But since I could not be physically present, I read her journal chapters and compared them to my own experience, living in the urban sprawl of a metropolitan city. No woodland, just a small city lot, small house, and small perennial garden. Could I find parallels to her experiences? Or

could readers, living in different locations, identify with the changes she described to her woodland?

She made me think about the increased frequency of “100-year storms” and record-setting weather events (22 inches of rain in August) in my area. I see the changes in our urban mammal populations (e.g., skunks, rabbits, chipmunks), butterfly and mosquito populations, seasonal temperatures not following predictable patterns, and longer periods of droughts followed by too-heavy precipitation. I remembered (and liked) the warmth of an early spring only to watch the buds of emerging flowers and trees be nipped by a frost occurring on a normal seasonal date. So, yes, I found parallels, and the more I walked with her through her journal, the more connections I was able to make.

The book provides a very good explanation of climate change. Too often, the language of science gets in the way. We need a science conversant-society, but we are far from being there. We need a society that has a healthy trust of science. We are not there either. We need to have a society that believes that science and religion can be on the same side. Still, not there. What this book provides is good, understandable science and gentle reading. And, if you allow it, you will realize that the changes she describes in a woodland in Iowa are the same ones you find in your own backyard.

Mutel points out that, initially, climate change will not affect all of us the same way. Poor nations will find it more difficult to recover from severe weather events. The poorest people will be the least likely to prepare for the changes to come. I think of how difficult the recovery process was for hurricanes Katrina and Sandy or the number of deaths of elderly people during the extended heat waves in Chicago. Climate change is a social justice issue. Christians know of God’s love for his creation and for all his children. As Christians, we need to mirror God in our actions.

Mutel has faith in this planet’s people and in her nation, that they will act to slow climate change. She suggests meaningful ways in which people can act. She is optimistic, and she made me a little more so. However, it is difficult to be optimistic. I watch politicians continue to block basic measures to address the issue, and I see how corporate wealth influences decision making. I would like to believe that my reducing my energy footprint, and Mutel saving her woodland, is all that it will take. But I am wrong. We cannot have national elections without this issue being discussed and debated. We cannot have the world’s religions ignore the symptoms. The world communities differ in their contributions to climate change, in their ability to respond to climate change, and in their ability

to bear the costs involved. Whatever the imbalance, we will all suffer the consequences.

It is important to have books like *A Sugar Creek Chronicle* written for nonscience citizens. We need gentle, firm persuasion. We need a better understanding of the issues. We need hope. All of these are provided in this book. Get a copy, read it, and pass it along.

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EARTH SCIENCES

EARTH SCIENCE: God’s World, Our Home by Kevin Nelstead. Austin, TX: Novare Science & Math, 2016. xxii + 501 pages. Hardcover; \$75.00. ISBN: 9780096352911.

I spent many years teaching science to young adolescents in Christian schools. Throughout those years, I generally preferred using a secular text, because I found that the science content was often stronger, even if a distinctively biblical perspective was lacking. I believed that I, as a middle school teacher, was better equipped to infuse a biblical perspective into my lessons than to develop the science content for myself, and so I made my curriculum choices along these either/or lines. Thankfully, with the ongoing development of new texts, this sort of either/or decision making may no longer be necessary. Nelstead’s *Earth Science: God’s World, Our Home* is a strong offering in terms of both the science content and the faith perspective. The text invites students and teachers to do “good science” while also presenting a faithful biblical worldview.

Before becoming a teacher at a Christian school, Nelstead served as Senior Cartographer, Geospatial Analyst, and Natural Resources Specialist for the United States federal government for seventeen years. His educational background is strong in Earth science, particularly in geology. He developed this text for middle school teachers in Christian schools based on three core principles: (1) Mastery: aiming for deep understanding and retention rather than the coverage approach prevalent in many science curricula; (2) Integration: deliberately uncovering the connections between the sciences and other disciplines; and (3) Kingdom Perspective: teaching students to “effectively engage issues” and “perceive God’s fingerprints in creation” (pp. xiv–xvi).

The text begins with two helpful prefaces: one for teachers and one for students. In these prefaces, Nelstead explains the approach taken in the text in a way that is appropriate for each of these audiences. He includes an exposition of the faith perspective,