

and war made the material ubiquitous, especially in the form of the World War I-era Nissen hut and its famed American descendant, the Quonset hut of World War II. Corrugated metal also permitted “the epic scale of airship hangars.”

Despite its early role in London as a cutting-edge material, corrugated metal has always had a somewhat raffish image, for it lacks the solidity of stone or the natural warmth of wood (though these shortcomings are somehow never held against vinyl siding). Shanties the world over are made from corrugated metal, and humanitarian organizations make extensive use of it to house refugees and people who live in disaster zones. Yet it has also won favor with famous architects, including Jean Prouvé, Frank Gehry, and Norman Foster. Corrugated iron is especially prominent in Australia, where Glenn Murcutt’s lyrical use of it to clad high-design homes no doubt helped him win the prestigious Pritzker Architecture Prize.

Corrugated Iron is a wonderful book, even if the authors are sometimes scarily indefatigable in their fervor for the subject, which is perhaps inevitable given that the book’s back flap says Holloway has a “great passion” for “researching and communicating the history of corrugated iron.” But if the historical text flags occasionally, the stunning color images hold our attention. Especially striking are the ornate chapel built in Scotland by Italian prisoners of war, the shockingly modern Sheerness Boat Store (c. 1860) in England, and the many photos of sinuous structures by Japanese architect Shuhei Endo, which are by themselves worth the price of the book.

I live in a corrugated-steel house and can attest that the stuff has its quirks. It tends to vaporize the geraniums by reflecting the sun’s heat, for example. And whatever you do, don’t forget to install lightning rods. As someone wrote of the British consul’s corrugated-iron house in Panama in 1855, it’s “a great target for all the artillery of heaven.”

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Bad Seeds

Reviewed by Flora Lindsay-Herrera

RECENTLY, I ATTENDED A presentation at Cambridge University by an agricultural economist who sang the praises of biotech crops—genetically modified organisms (GMOs)

engineered for traits ranging from insect resistance to herbicide tolerance. Several audience members recited the familiar objections to GMOs, which make up a majority of corn, soybean, and cotton crops in the United States: consumer health risks, poor crop performance, and the financial burden on farmers who must buy or license patented seed varieties every year. The economist shouted that his questioners were engaging in “subjective scaremongering and ranting.”

Sadly, this was a fairly typical exchange in the GMO wars. Though purportedly about matters of scientific fact—do these crops help or harm us and our environment?—the debate is dominated by the clash of mutually uncomprehending values and cultures. For every agricultural specialist extolling GMOs’ virtues, there is a Claire Hope Cummings, who alleges in *Uncertain Peril* that GMOs were “created by industry, for industry.”

Uncertain Peril joins the passel of books denouncing industrial agriculture for its role in “extinguishing agricultural diversity.” The plight of our seed supply was highlighted when the Global Seed Vault opened in Svalbard, Norway, in February. Of all the food crops humans have ever cultivated, more than 75 percent have disappeared, most in the last 100 years. Concern that we are losing seeds—perhaps with strains of resistance or other traits that will be vital in the future—prompted an internationally funded group called the Global Crop Diversity Trust to establish a “doomsday vault,” in which seeds from the world’s food plants can be stored for future retrieval in the event of a global calamity, such as climate change, or when war or natural disasters damage the holdings of regional seed banks (as recently occurred in Iraq).

Seed banks are useful, Cummings contends, but

UNCERTAIN PERIL:
Genetic Engineering
and the
Future of Seeds.

Claire Hope Cummings.
Beacon. 232 pp. \$24.95

the principal solution to the loss of diversity is to encourage local seed saving and privilege farmers' rights to develop locally adaptable crop varieties. Currently, she argues, those efforts are stymied by companies that market only a few crop varieties, and by the widespread practice of patenting seed genomes.

Cummings's background in environmental law and journalism serves her well as she acquaints readers with the contours of the seed debates. But her activist bent is evident in her reduction of the issues to a two-dimensional standoff, and her slim bibliography in some cases simply refers readers to the general websites of groups such as "Organic Consumers Association" and "Genetic Resources Action International."

Cummings's biases are clear when, for example, she attacks Monsanto—one of the largest distributors of GMO seeds and a company often criticized for aggressively filing lawsuits against farmers it suspects of violating its seed patents—for monopolizing agribusiness. She bases her case primarily on the stories of a few farmers Monsanto sued, and on information provided by the Center for Food Safety, a nonprofit organization dedicated to "challenging harmful food production technologies and promoting sustainable alternatives."

One of the strangest omissions in *Uncertain Peril* is any mention of Norman Borlaug, the Nobel Peace Prize-winning agronomist who introduced a high-yield wheat in the 1960s that was the forerunner of today's more sophisticated biotech crops. Borlaug remains an iconic figure for GMO advocates (Monsanto recently donated \$5 million to the Borlaug-founded World Food Prize for its "Borlaug Dialogue" program on global food security). He believed that better agricultural technology could help feed earth's growing population, an argument that remains a cornerstone of agricultural biotech's defense. Whatever Cummings thinks of his ideas, a thorough discussion of GMOs cannot leave them unaddressed.

After running through industrial agriculture's dystopian fields, Cummings arrives at the hopeful paradise of GMO-free organic farming. She proposes promoting sustainable agriculture by

renouncing our domination of nature and returning to the "cooperative reciprocal relationship" of pre-agribusiness days. Yet she poses a false choice between relying on the judgment of the "techno-elites" and using "our common sense and moral compass" to guide public policy. Yes, "stories can mend our broken world," but only if they aspire to persuade—not drown out—opponents. Until scientists can engineer a second planet, biotechnology specialists and organic farmers must find a way to coexist on this one.

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Fowl Sport

Reviewed by Mark Jerome Walters

LIKE MOST GOOD HISTORIES, Scott Weidensaul's fascinating account of birding in America dispels many myths. While most histories of American ornithology begin with the early-19th-century luminaries Alexander Wilson and John James Audubon, Weidensaul points out that birding on this continent was pioneered by "field ornithologists" who were here long before: "the Indians, of course, whose knowledge of birdlife was based on deep association, long observation, and at times lifesaving necessity."

Weidensaul also challenges often-cited federal estimates that there are between 46 million and 68 million U.S. birders—a term that, loosely construed, describes even people who hang a bird feeder on the porch. Only about six million people can identify more than 20 bird species, according to the U.S. Fish and Wildlife Service; the rest hardly deserve the badge of a true "birder." However birding is defined, it is one of the fastest-growing outdoor activities in the United States. It's an inexpensive pursuit for retirees and appeals to the growing number of people interested in the environment.

Weidensaul patiently and methodically sketches the scientific and artistic contributions of the most famous early birders, including Mark Catesby,

OF A FEATHER:
A Brief History of
American Birding.

By Scott Weidensaul.
Harcourt. 358 pp. \$25