



Joshua Blu Buhs. *The Fire Ant Wars: Nature, Science, and Public Policy in Twentieth-Century America.* Chicago and London: University of Chicago Press, 2004. x + 216 pp. \$55.00, cloth, ISBN 978-0-226-07981-3.

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"This book is about nature," writes author Joshua Blu Buhs in the first line of *The Fire Ant Wars*, and "the ways that Americans thought about it during the twentieth century, the ways we have transformed it, and the ways, in turn, that we have been changed by nature" (p. 1). Such a thesis will hardly surprise environmental historians, for the middle ground between the human and nonhuman is our intellectual home turf. That thesis might also seem a bit too ambitious for such a small book. From economics to science to religion to philosophy, the ways Americans have interacted with nature are almost innumerable, and at 216 pages *The Fire Ant Wars* could hardly deal with them all. Indeed, the book is less about Americans' broader interaction with the natural world than certain Americans' reactions to one of its more troublesome denizens. But this particular study's specificity is also its strength. In *The Fire Ant Wars* Buhs has produced a clearly written, impressively researched, and fascinating account of the post-war campaign to eradicate what is perhaps the American South's most famous insect pest, *Solenopsis Invicta*, the imported red fire ant. The human side of the story is especially interesting, and where *The Fire Ant Wars* really shines is in its exploration of clashing scientific egos, bureaucratic maneuvering, ruthless ecological management

and the changing historical context that brought such management into question.

If you have lived or spent time in the Deep South, you are likely on painfully intimate terms with the fire ant, a rust-red insect whose mounds dot the region's yards and fields and whose burning sting belies its tiny size. *Solenopsis Invicta* evolved in the floodplains of South America, where it resided in the open and disturbed landscapes created by regular torrents. Like so many other exotics, it came to the United States via international trade, entering Mobile, Alabama in the 1930s amid the cargo or ballast of some unknown ship. The fire ant's numbers might never have exploded across the South had it not arrived during one of the region's great historical transformations. In the 1930s and 1940s the South was in the midst of a vast human-engineered ecological transformation, a "bulldozer revolution," as Buhs calls it, echoing the words of C. Vann Woodward (p. 24), that made it ripe for invasion. Urbanization and industrialized agriculture turned much of the South's forests, scrublands, and small tenant farms into a routinized and highly disturbed landscape of giant soybean fields and livestock operations. The fire ant, ever the opportunist, found the new ecological South an ideal habitat, feasting on its crops, native insects, and even its wildlife. It was helped along significantly in its spread by the South's nascent

nursery industry, hitching rides in the soil of nursery stock to cities across the region. By the late 1950s the ant could be found from South Carolina to east Texas. But was *Solenopsis Invicta* a real threat to human and nonhuman life in the South, or just a regrettable nuisance (or perhaps even a boon)? In the varying answers to this question lay the seeds of the eponymous fire ant wars that raged from the 1950s through the 1970s.

For some, particularly the entomologists of the U.S. Department of Agriculture's new Plant Pest Control division (PPC), the fire ant was a plague of biblical scale. Steeped in a culture that emphasized the efficient, scientifically oriented control of nature, they accused the fire ant of all manner of crimes against wildlife, agriculture and humanity and highlighted studies about its dangers, including those of future environmentalist and Harvard professor E. O. Wilson, then a young ant researcher. Meanwhile the PPC and its associates publicized lurid and sometimes questionable tales of ant-induced misery and fatality, even invoking Cold War fears by comparing the ant's communal social structure and relentless expansion with Soviet-style Communism—*Solenopsis Invicta* as a literal red menace. With the support of allies in national government, the South's legislatures, chambers of commerce, and newspapers, in the late 1950s the PPC launched a campaign of total eradication through the liberal use of chemicals like heptachlor, dieldrin, and, later, the seemingly ideal ant-killing pesticide Mirex. The real severity of the fire ant threat was not as clear as the PPC claimed, but in retrospect that was somewhat beside the point, for the "eradication ideal" involved more than merely stopping the ant (p. 61). As Buhs notes perceptively, the PPC was "a new, unproven division" of the USDA which had "come into bureaucratic being" with "new and audacious goals" of a pest-free world courtesy of artificial pesticides. Thus "its officials chose to eradicate the ant in order to prove the validity of those goals and the power of their bureaucracy" (pp. 78-79). For pest control as for other federal conservation pro-

grams like reclamation, timber, grazing, and the like, bureaucratic self-preservation often trumped science and economics in setting policy.

But other scientists, sportsmen, and associated nature lovers rejected the eradication ideal as economically inefficient, too narrowly focused, and harmful to humans and animals alike. To them the fire ant was a nuisance at worst, and the quest to eradicate them more dangerous to health and life than *Solenopsis Invicta* could ever be (some even saw the ant as a kind of mascot, an admirable example of perseverance in the face of persecution). Entomologists at a number of southern universities, for example, attacked the PPC's science and chastised it for its exclusive focus on chemical control and its naive faith in the possibility of eliminating the ant completely. Like the PPC scientists, Buhs observes, these researchers were not without their own subjective motivations—questioning E. O. Wilson's ant studies in particular helped them carve out a professional foothold in their field even as it revealed weaknesses in the eradication ideal (pp. 82-92, 122). Wildlife biologists at the U.S. Fish and Wildlife Service and elsewhere (influenced by their own set of professional interests and assumptions) documented a frightening trend of bird and animal fatalities in the wake of eradication treatments. Sportsmen and bird-watchers sounded their own alarms in newspapers and trade journals. All of this took place as the new "environmentalism" blossomed in the fertile soil of postwar economic growth. It was no coincidence that in *Silent Spring* (1962) Rachel Carson, drawing on wildlife biology and downplaying the PPC's concerns, portrayed the ant not as a villain but as the object of an irrational campaign of chemical destruction. Postwar conservative-style fears of centralized government power informed critics of the eradication ideal as well, who saw in the PPC a rogue bureaucracy intent on forcing its authority on the public, willing or not.

The champions of total eradication had the lion's share of funding, promotional apparatus,

and influence in government, but it would be their adversaries who would win the fire ant wars and end the eradication program entirely by the late 1970s. The program's Achilles' heel was the toxicity of its preferred pesticides. First, the FDA banned the presence of heptachlor when residues were found in food in 1959. Then Mirex, which had once seemed the perfect fire-ant killer, because it could be administered in bait form and required only tiny doses for effectiveness, proved highly toxic to shellfish and a potential human carcinogen. But historical context helped kill the eradication program as well. By the 1970s environmentalism had become an influential social force and environmentalists had gained powerful weapons in bureaucracies like the Environmental Protection Agency and advocacy groups like the Environmental Defense Fund (their motto: "sue the bastards!"). Citing the toxicity problem and battling eradication supporters in court, environmentalists finally brought the USDA fire-ant program to an end in 1978. The irony of their victory, however, was that the fire ant turned out to be more of a threat than the environmentalists were willing to admit. By the late 1980s and early 1990s the ant, now left to fend for itself, was on the resurgence, helping to fuel an anti-environmental backlash across the South as it once again seemed less of a mere nuisance than a scourge.

The best thing about *The Fire Ant Wars* is Buhs's use of sources—multiple archives, previously unused document collections, oral interviews, a broad sampling of secondary literature—and his subtle understanding of the intricacies of scientific rivalries and bureaucratic imperatives. Buhs also never loses sight of the fact that the fire ant is more than a mere "construction," that its own "agency" (for lack of a better term) had much to do with its success in the South. Nonhuman nature, we are reminded, has an irreplaceable role in creating the world we humans live in. Buhs's political evenhandedness is also admirable. He rightly excoriates the ecological simplemindedness of the eradication ideal, but is not afraid to call out envi-

ronmentalists on their own assumptions, as when he notes Rachel Carson's dismissal of certain USDA studies (p. 112-114) and other environmentalists' characterization of *Solenopsis Invicta* as essentially harmless. The larger lesson, Buhs concludes in the book's last chapter, "The Practice of Nature," is that humans can neither control nature utterly nor abandon the attempt entirely—our needs and our power force us at times to play God with the natural world, like it or not. But it is not an entirely convincing argument. While the fire ant might be something of a serious pest after all, Buhs's own story of the PPC's zealotry suggests that efforts to control the ant all too easily became dangerous in their aggression and arrogance, and that leaving *Solenopsis Invicta* alone was the far better choice. One can imagine similar scenarios elsewhere.

Nevertheless, in the end *The Fire Ant Wars* is an excellent example of sophisticated environmental history, a book broad in its reach and full of nuance in its interpretations. In particular it serves as a focused yet inclusive case study for a number of topics—the history of pesticide use and risk, the evolution of federal environmental policy, the role of science and scientists in environmental advocacy—and pairs well with broader studies such as Edmund Russell's *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring* (2001). Meanwhile, historians of science will find a familiar story in Buhs's treatment of the complex interplay between scientists and bureaucratic interests both friendly and hostile. In the classroom *The Fire Ant Wars*, while probably too narrow and exhaustive for undergraduates, would be a good model for graduate students training in environmental history, for it pulls together extensive primary and secondary sources, arranges them into a compelling and perceptive narrative, addresses vital questions in the field, and does it all in just over two hundred pages.

Finally, a word about the book's delightful cover art. The outside of *The Fire Ant Wars* is stark white with bold black, red, and gray print except where a cluster of fire ants swarm across the lower-left corner, over the spine, and onto the back. Having lived and worked as a guide and outdoor educator in Georgia for years (before moving to Kansas), my first inclination upon pulling the book from my mailbox was to throw it down and begin brushing myself off frantically. It was a testimony to my enduring memories of *Solenopsis Invicta* and, at that moment at least, the eradication ideal did not seem like such a bad idea after all.

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