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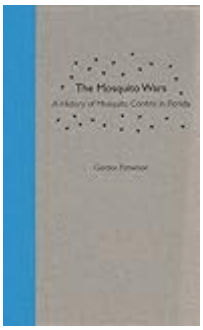

Gordon Patterson. *The Mosquito Wars: A History of Mosquito Control in Florida.* Gainesville: University Press of Florida, 2004. xviii + 263 pp. $55.00 (cloth), ISBN 978-0-8130-2720-3.

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The Ubiquitous Pest

Anyone with even limited time in Florida has quickly realized what effect the mosquito has on the state's environment. Whereas people in more moderate climates may enjoy the cool twilight hours, residents typically stay inside until well after dark and after the conclusion of the mosquito's feeding forays.

But evenings of swatting and scratching have been a part of Florida's history, and as Gordon Patterson reminds us, the pains we endure now are only a fraction of what they were before man, biology, chemistry and technology turned the tables of Florida's disease- (and non-disease) bearing insects.

The Mosquito Wars is a title in the Florida History and Culture Series of the University Press of Florida. It fills an important an underappreciated niche in Florida historiography. As Patterson points out, mosquito-borne diseases like yellow fever hindered Florida's growth until the early twentieth century.

The first chapter opens with a world history of mosquito and pest control before focusing on Florida itself. As Patterson notes, "the first Europeans to arrive in Florida noted three things: Florida was flat, watery, and populated with exceptionally large numbers of mosquitoes." Early explorers, settlers and other travelers had to heed the ubiquitous pest in their activities.

In chapter two, "The Origins of Mosquito Control in Florida," Patterson dates the beginning of the organized "war" against mosquitoes to July 28, 1888, when Plant City businessman R. D. McCormick was diagnosed in Jacksonville with a case of yellow fever. McCormick's illness set off an epidemic that set off a six-month city-wide quarantine, striking almost two thousand people and killing more than one hundred by late that year.

One of the diagnosing physicians, Dr. Joseph Y. Porter, was an early warrior against yellow fever in early 1887. Porter took the lead in quarantining yellow fever victims. For his efforts, he was awarded with the leadership of the recently established State Board of Health. Porter's great contribution was to correctly understand the mosquito as the "sole and only means of transmitting yellow fever" (p. 25). Working against commonly held misconceptions, Porter worked to educate the public about the connection between mosquitoes and disease,

and urging individuals to make anti-mosquito efforts in their homes and localities.

From there, Porter and other progressively and scientifically minded individuals embarked on a decades-long crusade to eradicate the mosquito threat from the state. While not stating so explicitly, Patterson details these campaigns as part of the modern versus traditional, Progressive versus anti-Progressive tendencies of the first two decades of Florida's history, including the Devonian tendencies of Governor Sidney J. Catts. Governor Catts slashed the Health Board's budget, cutting into the anti-mosquito campaign. Regardless, anti-mosquito activists continued to work and to cooperate with the U.S. Public Health Service in the late 1910s and early 1920s. In 1922, health service experts created the Florida Anti-Mosquito Association to cultivate a political action arm for their work (chapter 3). FAMA would go on to become a major player in pest control, lobbying both the state and public.

Chapter 4 chronicles FAMA's first coordinated efforts to battle mosquitoes through a campaign of education and sound application of scientific principles. Patterson details the story of St. Lucie County's war against mosquitoes, and the connection between mosquito control and rapid growth (of humans). The city of Vero aimed to take advantage of the Florida land boom by attracting new residents. Vero's business circles resented the strict "blue" laws of their county and the "anti-Progressive" attitudes of the county's leaders in the seat of Fort Pierce.

After the sheriff shut down a movie showing in Vero one Sunday, local leaders resolved to break away from St. Lucie County. Vero leaders got their way, leading to the formation of Indian River County. As a result, they could more effectively create a mosquito control district through a concerted effort of ditching, dredging, and other aggressive measures to eradicate or contain them. Such efforts were not only for health reasons, but to position Vero as a progressive, growth-friendly town for visitors and residents.

From efforts such as these, anti-mosquito advocates quickly learned that mosquito control needed more extensive support from state and federal officials–a story told in Chapter Five, "The Depression Years." But against the backdrop of the late 1920s Florida land bust and the Great Depression, such requests were harder to justify. But the 1930s Floridians witnessed the emergence of a new generation of pest control proponents such as state health officer Henry Hanson and Fred Stutz, manager of mosquito control programs for both Broward and Dade counties.

World War II marked a major turning point in the anti-mosquito movement, as told in Chapter 6. America's entry into that war sparked massive interest in anti-mosquito and anti-malaria campaigns to protect recruits and workers streaming into Florida (and soon to be dispatched around the world). The most crucial of the programs designed for this effort was the U.S. Public Health Service's Malaria Control in War Areas (MCWA) program. Its simple mission was to "Protect war workers from mosquito-borne diseases." It had a multi-million dollar budget and over three thousand employees working hundreds of locations. MCWA workers not only fought mosquitoes themselves but trained military officers to do so themselves in what Patterson calls "malaria boot camp." Another program through the state's Division of Insects affecting Man and Animals in the Bureau of Entomology embarked upon an accelerated effort to better understand chemical ways to control pests like mosquitoes and lice. This effort eventually culminated in the development of dichloro-diphenhyl-tricholorethane-DDT. DDT gave humanity a truly powerful weapon against insect pests.

Over the next two decades, DDT's effectiveness laid the foundation to becoming a controversy in and of itself, which is recounted in Chapter 7, "The Golden Age of Mosquito Control." Using DDT, anti-mosquito eradication became truly widespread. DDT was used to prevent a return of malaria from homeward bound GI's, counties and local districts were encouraged to think of exterminating or permanently controlling mosquitoes. Such efforts were seen as part of a coordinated, modern and pro-growth strategy. Or, as Patterson puts it, "Florida could no longer afford a hit-and-miss approach to mosquito control" (p. 123). Too bad, however, that the emergence of DDT-resistant insects was overlooked or downplayed.

Chapters 8 and 9 deal with the era following the "golden age," when mosquito control efforts encountered earnest and articulate arguments against profligate use of pesticides. Rachel Carson's Silent Spring represented the first environmentalist argument against such an approach. Ironically, however, success bred complacency. Waves of tourists and residents were experiencing the non-presence of mosquitoes. Simply put, "recent arrivals had no experience with high levels of pest mosquitoes and many were unaware of the role mosquito control had played in making Florida habitable (p. 149). Despite the best efforts of scientists and entomologists, books like *Silent Spring* were instrumental in convincing many people that pesticide, not pests were the real problem. By the 1970s, the desire to preserve Florida's natural envi-

ronment clashed with the effort of pest control efforts to keep Florida habitable, at least for humans used to a mosquito-free environment. This story is told more fully in Chapter 9, "The Fog of War," when, by the early 1990s, mosquito control had entered a more sophisticated, professional phase to incorporate both growth-friendly and environmentally sustainable efforts.

Patterson ends with a harbinger in the postscript: the emergence of West Nile Virus and Eastern Equine Encephalitis and the reemergence of malaria and dengue fever cases. He explains that the future depends upon finding a way to reconcile mosquito control and environmental preservation. From smudge pots to DDT, detours like bat towers and purple martin birdhouses, and on to newer innovations, Florida's battle with the insect world has been an ongoing one. Patterson tells it in a most interesting and engaging manner.

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