Cherokee Medicine, Colonial Germs: An Indigenous Nation's Fight against Smallpox, 1518–1824. By Paul Kelton. Norman: University of Oklahoma Press. 296 pages. \$29.95 cloth.

Historian Paul Kelton contends that since colonial times, variola major, or smallpox, has been blamed for the majority of the countless deaths of American Indians, a view first put forth in Alfred Crosby's seminal 1976 The William and Mary Quarterly article, "Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America." Following Crosby's lead, scholars have inferred that smallpox and other upper-respiratory viruses spread rapidly throughout the Americas like "dropping lighted matches into tinder," resulting in a ninety-percent decline in the aboriginal populations (Crosby, 289). Kelton's well-researched book questions several premises of the "virgin soil" thesis: European invaders inadvertently spread microbial infections; Natives were immunologically defenseless and culturally incapable of coping with diseases due to ignorance of contagion and quarantine; and Native reactions to outbreaks—suicides, abandonment of the sick, and flight to other communities—spread infections far beyond the frontier. In this analysis, overreliance on the virgin soil thesis to explain Native mortality rates from smallpox undermines other major epidemiological factors linked to its virulence: human agency and colonial violence.

Noting that even preeminent scholars like Jared Diamond and Charles Mann have used the virgin soil thesis to make sweeping statements about rapid depopulation in the Americas, Kelton warns against taking written accounts out of context to make generalizations about regional and continental epidemics. For instance, trader James Adair described the 1738–1739 smallpox epidemic in which Cherokees drowned after taking ceremonial sweats and plunging into the river; this single occurrence has been used to represent the collective failures of other tribal practitioners. Because written accounts build upon one another and replicate singular events, Kelton chooses to focus on a well-documented tribe and their response to smallpox—the Cherokees—in order to demonstrate that human agency and colonial violence "set the stage for these supposedly unintended biological events, curtailed the abilities of Natives to protect themselves from infection, exacerbated mortality, and impeded recovery" (9).

The epidemiological dynamics of the "ordinary" subtype of variola major, the most lethal and most common form of smallpox in human history, are key to understanding the relationship between human agency and colonial violence to the transmission of smallpox. Before its eradication in the late 1970s, smallpox was commonly transferred either face to face within a six-foot area through the inhalation of airborne variola droplets, or by contact with objects contaminated with infected body fluids. After a noncontagious incubation period averaging ten to fourteen days, initial symptoms of fever, malaise, back pain, body aches, and even vomiting set in for the next two to four days, followed by lesions forming on the tongue, mouth, and throat. At this time, the victim was highly contagious. Next, a pustular rash developed on the face and spread over the entire body; pustules were densest on the face, arms, and legs. This stage was marked by delirium, coma, and even death (about 30% of all cases; 40% according to Kelton). If death did not occur, the survivor was no longer contagious and immunity was conferred.

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Easily identified by its symptoms, smallpox spread over greater distances compared to influenza and measles, which facilitated Kelton's tracking of this deadly disease by using abundant archival materials. He associates the spread of smallpox between 1518 and 1824 with movements of Natives and Euro-Americans across the Cherokee landscape (Middle Towns of western North Carolina; Overhill Towns of eastern Tennessee; Lower Towns of northwestern South Carolina; and Valley Towns of northeastern Georgia). There are no recorded epidemics among the Cherokees before the Great Southeastern Smallpox Epidemic of 1696–1700, so presumably they avoided these outbreaks. However, some Cherokees over age forty survived the 1738–1739 outbreak, suggesting that they were immune from previous exposure.

Kelton argues that Adair's description of sweatlodge-related mortalities does not represent the totality of Cherokee responses to smallpox because their leaders "incorporated smallpox into their cosmology, constructed rituals to deal with threatened or actual epidemics of the disease, and gave constructive advice to their followers about avoiding exposure" (12). Perhaps Adair failed to understand that curers were performing a version of the Going-to-Water rite to purify patients of impurities and to appease the spirit world. Instead of discarding their curative rites, Cherokee responses included the smallpox ceremony, a "psychic dance" that lasted seven days, during which the participants were sequestered from the outside world, thus avoiding introduction of the virus into the community. Cherokees also identified coastal communities like Charles Town as centers of contagion to be avoided. Overall, Cherokee medical responses to smallpox were not inferior to Western practices of the time, which were largely mired in Galenic humoralist pathology of the four temperaments.

Contrary to the virgin soil thesis, the Cherokee population actually increased between 1721 and 1824, the period when they were most vulnerable to smallpox outbreaks. During the French and Indian War (1754-1760), Cherokee warriors were reluctant to assist their British allies in the north, where smallpox ravaged the countryside from Pennsylvania to the St. Lawrence Valley. As long as the fighting remained in the north, Cherokee communities in the south were safe. Unfortunately, alliances shifted in 1758 when more than thirty Cherokee warriors returning from the capture of Fort Duquesne were massacred by Virginians. In the ensuing Anglo-Cherokee War (1759-1761), Cherokees attacked settlements in Virginia and the Carolinas, prompting colonial forces to retaliate by sacking and burning Cherokee villages. Smallpox that wreaked havoc on the Carolinas was transported by the militias and spread to the Middle Towns and Lower Towns, where it thrived in the crowded conditions of refugee villages. Famine exacerbated Cherokee suffering. During the American Revolution, Cherokees were largely unaffected by the Great Smallpox Epidemic of 1775-1782 that ravaged other parts of the eastern seaboard. Nevertheless, American aggression inflicted Cherokee mortalities that thwarted them from recouping population losses from the 1738-1739 and 1759-1760 epidemics: human agency and violence, not smallpox, caused Cherokee mortalities.

Though he believes its theoretical construct is flawed, Kelton does not support discarding the thesis. As Kelton has aptly demonstrated, the virgin soil thesis often masks that human agency and colonial violence were undoubtedly deadlier for certain

tribes, especially the Cherokees. First, many authors describe smallpox using metaphors ("shock troops") and similes ("spread like wildfire"), language that obscures the human agency that facilitated its spread: "the Native slave trade, warfare, sustained commercial intercourse, and scorched-earth military tactics" (214). Second, to assume that Natives were passive victims overlooks their ability to absorb new diseases into their cosmology and to develop effective curative rites. Finally, application of the thesis is often founded on anecdotal evidence that does not always stand up to historical scrutiny, for instance, the claim that smallpox was deliberately spread by scab-laden blankets. According to Kelton, searching for such Lord Jeffery Amherst-inspired episodes is "a quest of futility" (136). I concur.

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Colonial Genocide in Indigenous North America. Edited by Andrew Woolford, Jeff Benvenuto, and Alexander Laban Hinton. Durham: Duke University Press, 2014. 344 pages. \$94.95 cloth; \$26.95 paper; \$94.95 electronic.

Genocide studies that focus on indigenous peoples have been untying the complexities of colonial expansion, conquest, and ongoing cultural domination in the Americas, and especially those English colonial patterns that led to the United States, while at the same time also steadily advancing a more sophisticated discourse. This edited volume, divided into four main sections, makes significant contributions towards our better understanding of this important topic.

"Intersections and Trajectories," the opening section of Colonial Genocide in Indigenous North America, includes an essay on boarding schools by coeditor Woolford, analysis of "shatter zones" by Robbie Ethridge, and relational views of genocide by Christopher Powell and Julia Peristerakis. An "Erasure and Legibility" section follows, with Benjamin Madley's powerful analysis of the Modoc resistance considering how genocide is camouflaged by colonial wars. Gray H. Whaley contributes an analysis of genocide in Oregon, Tricia E. Logan writes about how memory and erasure are connected to national myths, and Jeremy Patzer links dispossession with residential school violence and its harmful effects. In the "Transformation" section, Margaret D. Jacobs similarly examines child removal, finding it a habitus of elimination by settler-colonial nations. Jeff Benvenuto's essay views ethnocide as colonial genocide, while Ladner identifies the passage of legislation that kills nations as "political genocide." This section ends with an essay by Colin Samson, who finds land claims that dispossess the Innu in Canada to be genocidal.

"(Re)Imaginings," the final and most critical section, begins with Joseph P. Gone's strong counter-analysis of the limitations of identifying genocide as linked with historical trauma. Then, in a pointedly opposite approach, Tasha Hubbard sees the destruction of the great buffalo herds as genocidal both in intent and practice. David B. MacDonald applies the UN genocide convention to residential schools.

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