

BOOK REVIEW

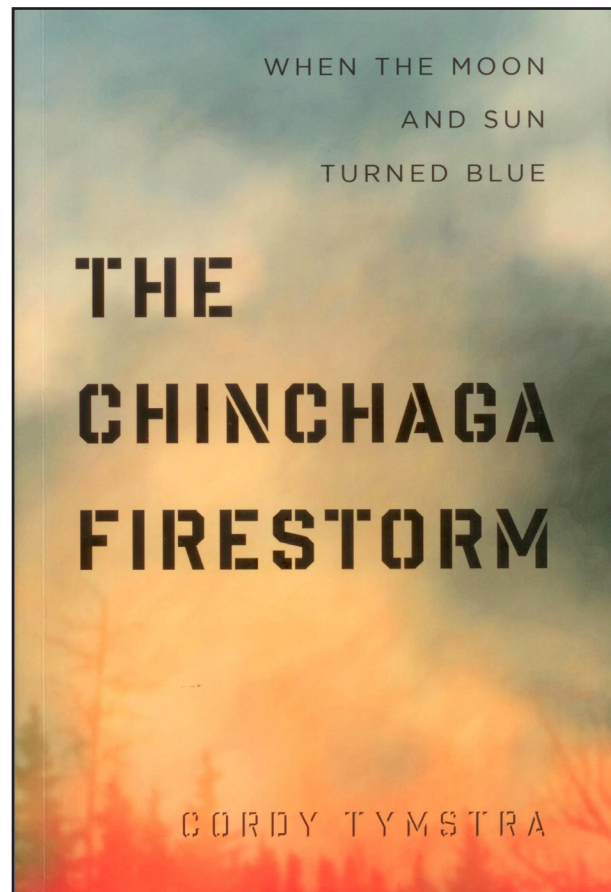
The Chinchaga Firestorm: When the Moon and Sun Turned Blue. 2015. By Cordy Tymstra. University of Alberta Press, Edmonton, Canada. Softcover. CA\$34.50. 227 pages. ISBN 978-1-77212-003-5

The Chinchaga Firestorm is the story of an incredible firestorm in western Canada during summer and early fall of 1950. The two million hectare complex of over 100 wildfires is the largest ever recorded in Canada, but because it was not within the boundaries of the fire suppression zone for the province of Alberta, it was not even recorded in the official fire report for that year! It was a complex of unrecorded “ghost fires” that were initially ignored in Alberta by all but local people, yet the firestorm became famous for the smoke plume that traveled around the world. Tymstra weaves stories of the fire, the local people who experienced it, and the worldwide effects of the smoke plume, explaining the book subtitle, “When the Moon and Sun Turned Blue.”

The introduction sets the stage for the boreal forest as a land of fire, with its flora and fauna adapted to recurring large, intense fires. Chapter 1 introduces the players that were present in 1950 to witness the event, including Frank LaFoy, who was the local forest officer responsible for forest protection over 26 000 km² of forest but was provided with few resources to protect anything. Chapter 2 describes “Black Sunday,” 24 September 1950, and the atmospheric conditions that caused it. By mid-afternoon that day, skies darkened in the eastern US, from Illinois to New York, due to the dense smoke from the British Columbia and Alberta fires trapped between two inversions—a blackout that persisted for hours. The illustrations in this chapter are particularly useful in showing the path of the plume. Chapter 3 notes the occurrence of other large fire events across North America, all associated with preceding dry winters, early springs,

extended summer droughts, periodic strong winds, and contiguous areas of large fuel loads. Interestingly, one of the events, the Yacolt Burn Complex (96 000 ha) of southwestern Washington, USA, is described as the largest fire in the state’s history, a record that “still stands.” But it was eclipsed in 2014 by the Carlton Complex (104 000 ha) and again in 2015 by the Okanogan Complex (123 000 ha), both in the northeastern part of the state, likely while this book was in copy editing and proof stage. As Tymstra notes in later chapters, we should expect many other such records to fall as fuels accrue and climate changes across the forests of North America.

Chapter 4 opens with accounts of blue moons and suns in Great Britain in late September 1950 associated with high concentrations of smoke from the Chinchaga Firestorm.



The unique particle size distribution of the smoke scattered more of the longer light wavelengths and less of the shorter wavelengths at the blue end of the spectrum. The composition of smoke, the evolution of research on aerosols created by fire, and smoke effects on human health and welfare are described in Chapter 5. Chapter 6 describes the spread of the Chinchaga River Fire, one of the larger fires that burned during the Chinchaga Firestorm. Although this fire started on 1 June 1950 and burned through September, most of the fire spread occurred during brief periods when high wind events occurred. On 20 September, for example, the fire raced an estimated 35 km with wind gusts of 80 km hr⁻¹. The last two chapters deal with the evolution of firefighting strategies and policy changes since the Chinchaga Firestorm. The book is meticulously footnoted, with close to 30 pages of small-font notes, and contains a 25-page index.

There were only a few inconsistencies in this detailed story of this immense firestorm. In Chapter 6, a forest cover map generated in 1957 shows the pre-burn vegetation of the Chinchaga River Fire, but only later in Chapter 7 do we learn that the local aerial photos used for the 1957 classification for this area were taken in 1950, just before the firestorm. The fires were never accurately mapped at the time. Two burned area provincial maps in Chapter 7 purport to tell the story that much of Alberta's landscape is a product of hu-

man-caused fire, but neither map separates human- from natural-origin fires. However, in Chapter 1, Table 1.1 notes that, of the large 1950 fires, 24 were human caused and 2 were lightning caused, with several others of unknown origin. There are several minor misidentifications of people. Andrea Tuttle, former head of the California Department of Forestry and Fire Protection, is listed as Rick Andrea Tuttle; Jerry Williams, former Director of Fire and Aviation Management for the USDA Forest Service, is identified as Chief of the Forest Service; and unfortunately, Cordy Tymstra himself is listed as a Wildlife Science Coordinator with the Government of Alberta on the back cover, when in fact he is a Wildfire Science Coordinator. These minor issues detract little from what is an exciting and educational journey back in time to uncover one of the most unique and yet overlooked megafires ever to occur.

While the book deals with many technical issues, it is written clearly and will be of interest to wildland fire managers and scientists, foresters, forest ecologists, and policy makers, as well those interested in western Canadian history and ecology.

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