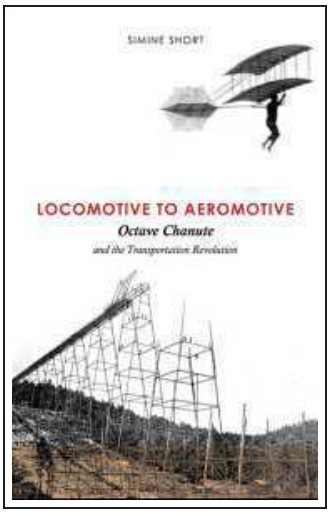
Book Review



Locomotive to Aeromotive:
Octave Chanute and the Transportation Revolution

by Simine Short
341 pages, 15x23 cm
Photos, diagrams, extensive footnotes, bibliography, index
University of Illinois Press, 2011
Urbana, Illinois, USA

Reviewed by Judah Milgram

One day, many years ago, your editor found himself in the company of fellow airplane enthusiasts pondering the question: what did people do before airplanes? There must always have been people like us, so what did they do before there were gliders and airplanes to tinker with?

Simine Short's biography of Octave Chanute presents one fascinating answer to this question. Chanute, a well-known aviation pioneer of the late 1800's, actually came to aeronautics late in life, after a long and successful career as a railroad surveyor, developer, and line manager; civil engineer, bridge builder, and manufacturer. While some accounts encapsulate Chanute's pre-aeronautical life with "Chanute, a successful railway engineer...", Short's biography presents Chanute's life as a complete story, beginning with his childhood in early 19th century Louisiana, through his life as a civil engineer and entrepreneur, and concluding with his involvement with aviation.

Chanute, born in Paris, France in 1832, came to the United States at the age of six with his father. With a high school education, he apprenticed himself to the Hudson River Railroad, working with a party of surveyors laying out the first rail connection between New York City and Albany, New York (completed in 1851). From there he gradually worked his way up to engineer and was active during a critical period in American railway history when the first lines were built from the East Coast into the interior. At the time, railroad building was tightly coupled with real estate development, and Chanute did well for himself in side investments in land along rail lines that he worked on. Chanute then went on to building bridges, including a railway bridge across the Illinois River in Peoria, Illinois (completed 1857) and a combined railway/vehicle bridge across the Missouri River at Kansas City (completed 1869 and the first rail bridge over the Missouri). Interestingly, Chanute served as an expert witness in a famous legal case involving the first railway bridge across the Mississippi at Rock Island, Illinois (destroyed in a steamboat accident in 1856). The attorney in that case was Abraham Lincoln, and the two men apparently became acquainted. Other Chanute contributions include the Chicago stockyards (1865), the Kansas City stockyards (1871), advances in the chemical treatment of railway ties and the introduction of the date-nail in American railroads.

Especially interesting are the threads drawn from his life as engineer to his foray, late in life, into the world of aeronautics. Chanute's aeronautical career was very productive but was really just one chapter (well, two in this book) in a long and interesting life. Short's account captures the excitement of this latter period in ample detail without overwhelming the rest of the biography. This is a service to the reader because the story of his aeronautical contributions is in fact engaging enough to fill a book by itself, with the distinguished engineering career leading up to it relegated to an introductory chapter.

Rather than succumbing to this temptation, Short describes how Chanute's early experiences contributed to an interest in aviation that blossomed towards the end of his life. According to Short, Chanute probably witnessed a hot-air balloon flight in Peoria, Illinois in 1856. An 1852 French-language pamphlet on flying machines, thought to have been sent to Chanute by his father (who had returned to France two years earlier, when Chanute was 18), survives to this day in the Chanute Collection at the University of Chicago Library.

Chanute's civil engineering experience informed his glider designs. The braced-truss biplane, ubiquitous in early 20th century aircraft, was a Chanute innovation informed directly by his bridge-building experience. It is telling that Chanute's celebrated 1894 volume, *Progress in Flying Machines*, had its origins in a series of articles Chanute published in a railway engineering journal.

Of equal significance, Chanute was a man devoid of jealousy when it came to aeronautical innovation and knowledge. Motivated by genuine interest in the topic rather than a desire for fame, and far from secretive, he corresponded with the likes of Lilienthal, Langley, and Zahm, and was more than happy to share what information he had with other aeronautical pioneers, including the Wright Brothers (who, it seems, did not always reciprocate with the same generosity of spirit). Chanute became a clearinghouse of sorts for technical information and habitually encouraged the progress of other pioneers, while at the same time pursuing his own efforts. Chanute's willingness to share technical information did not however originate with his interest in aviation. Rather, it echoed earlier periods in his life when he became accustomed to exchanging data with colleagues on (for example) the best treatments for wooden railroad ties and the most favorable rail geometries. Surely his innate character played a part as well.

With this book, Simine Short has done us all a great service. *Locomotive to Aeromotive* is a well written, serious work with an attention to detail that will appeal to historians. It's a good read for nonspecialists as well. Although she doesn't say it in so many words, one thing comes through quite clearly: Octave Chanute was a guy we all would liked to have met.