



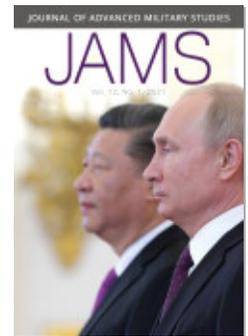
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*The Secret History of RDX: The Super-Explosive that Helped Win World War II* by Colin F. Baxter (review)

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(Review)



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such scholarly identification of rhetorical tropes allows a reader to go in-depth into this literature, without feeling sordid for doing so.

With so much to learn from and so many valuable historical explanations, Roberts-Miller's books are well worth reading. Yet, she needs to consider that there may still be information that needs to be released by the U.S. government to evaluate whether general levels of Iraqi military air force, army, and navy intelligence had flown from Iraq into the hands of U.S. or allied military planners. Sad as it may be to accept, the Iraq War did not originate from a tearjerker Hollywood film plot. Assuredly, there are real reasons to ask the national defense to stop a tyrant from killing anymore. What is really necessary at this point, however, is to look at Saddam's secrets and the extent to which U.S. military and other intelligence agencies received such information. Ascertaining if the information was considered generally credible and verifiable enough to exert ground and air forces against the Iraqi regime, which so brutally oppressed differing religious and ethnic identities, including Kurdish and Christian regions of the country that have yet-to-be-realized national aspirations, is what is really necessary for an accurate critique of why the 2003 invasion of Iraq happened the way it did.

*Rhetoric and Demagoguery* stirs the reader to try to be a public intellectual who will engage with the available information and study the relevant literature. All Americans need thought-provoking scholars like Roberts-Miller to stay informed enough to participate in public life. She has much to offer that is beyond debate anymore, like the U.S. government transgressions against Japanese-Americans and African Americans. She also has much to offer to provoke questions about why the United States went to war in Iraq in March 2003, although she does not have all the answers.

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*The Secret History of RDX: The Super-Explosive that Helped Win World War II.*  
By Colin F. Baxter. Lexington: University Press of Kentucky, 2018. Pp. 214.  
\$45.00 (hardcover).

Scholarship into World War II continues to unpack the complexity of the Allied efforts to harness science, industry, diplomacy, and organizational culture to defeat the Axis powers. In a fascinating book, Colin F. Baxter, professor emeritus of history at East Tennessee State University, opens a "remarkable, almost forgotten chapter" of the conflict in *The Secret History of RDX: The Super-Explosive*

*that Helped Win World War II*. Taking a page from the plea of historian Paul Kennedy to examine World War II “history from the middle,” Baxter offers a new perspective on the war by exploring the development and mass production of the world’s most powerful explosive then in existence, known as Research Department eXplosive or RDX. Through an Allied effort, “managers, scientists, captains and commanders, and the men and women on the production lines” surmounted “formidable technical and human obstacles” to produce RDX and its descendants of Composition B and Torpex in sufficient quantity to impact the war effort.<sup>1</sup>

First discovered in 1899, cyclotrimethylenetrinitramine, later known as Cyclonite, received study in various countries as an explosive in the 1920s, but the compound’s sensitivity and high production costs (compared to TNT) proved prohibitive. In the 1930s, British researchers at the Woolwich Arsenal in London mixed 60 percent cyclonite with 40 percent TNT and beeswax to produce Composition B. With less sensitivity to shock and 30–40 percent greater explosive power than TNT, the researchers at Woolrich confidently believed cyclonite, renamed RDX for security reasons, would prove invaluable loaded in Royal Air Force bombs and Royal Navy torpedo warheads. Production lines at Woolwich and later Waltham Abbey, however, could not produce RDX in sufficient quantity. British leaders, convinced of RDX’s importance, looked across the Atlantic for assistance.

In the literal search for more bang for the buck, British need for RDX harnessed research efforts in Canada and the United States. Breakthroughs in the synthesis of the explosive joined with the construction of production facilities in Quebec and in East Tennessee. Baxter centers his book’s focus on the latter, the massive Holston Ordnance Works (HOW) near Kingsport constructed by Tennessee Eastman, a subsidiary of Eastman Kodak. HOW, which began production of RDX and Composition B in May 1943, would provide 90 percent of the explosives used by American forces and 10 percent of the British. In another testament to America’s industrial might, HOW could produce 577 tons of RDX daily by February 1944, climbing to approximately 700 tons of RDX-rich Composition B by 1945.<sup>2</sup> Baxter’s chapter on HOW offers another window into the study of the American home front, with the plant offering economic opportunities for women and African Americans, albeit both subject to unequal pay and the racist inequalities of Jim Crow.

With RDX in quantity, Baxter showcases the impact of the super explosive in the air war over Europe, the Battle of the Atlantic, and in the Pacific theater. American rumors about the danger of Composition B’s sensitivity proved a source for mistrust and only 25 percent of bombs dropped by the U.S. Army Air Forces in Europe used the filling. “Had a much larger percentage of bombs been filled with Composition B and been used earlier, the effectiveness of the

bombing campaign against Germany might have been greater,” notes Baxter, albeit a use prevented by the limited supply of RDX and Composition B.<sup>3</sup> In the form of Torpex (42 percent RDX, 40 percent TNT, and 18 percent aluminum powder), the British 250-pound Mark IX aerial depth bombs proved the deadliest weapon against German U-boats.<sup>4</sup> Under the Pacific, American Mark 14 torpedoes carrying 1,100-pound Torpex warheads delivering an explosive force 150 percent greater than TNT alone devastated Japanese shipping.<sup>5</sup> Fast-burning Composition B, precisely placed around a plutonium core, ushered in the atomic age in the sands of New Mexico and the air above Nagasaki, Japan.

Baxter’s cogent writing is supported by an impressive body of international research. From his work at East Tennessee State, Baxter blends his familiarity with Tennessee history and previous research in British military history to outstanding effect to detail the transnational journey of RDX. He draws from multiple archives in the United States, United Kingdom, and Canada and enhances these primary records with a rich array of secondary sources from these same nations. A series of photos are found throughout the text, although a map would have been helpful to place RDX’s mass production in geographic perspective. His 36 pages of endnotes contain additional tidbits of information, although issue could be taken that this material is not in the main body of the manuscript, considering its brevity. This is at best a minor quibble.

*The Secret History of RDX* is an accessible book for a wide array of audiences. This work will prove useful to specialists and generalists of World War II history alike. Baxter has produced a valuable monograph of “history from the middle” and enriched understanding of importance of the triumvirate of industry, science, and Allied cooperation to forge the weapons essential for victory.

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## Notes

1. Colin F. Baxter, *The Secret History of RDX: The Super-Explosive that Helped Win World War II* (Lexington: University Press of Kentucky, 2018), 2, 143; and Paul Kennedy, “History from the Middle: The Case of the Second World War,” *Journal of Military History* 74, no. 1 (January 2010): 35–51.
2. Baxter, *Secret History of RDX*, 3, 105.
3. Baxter, *Secret History of RDX*, 51.
4. Baxter, *Secret History of RDX*, 133.
5. Baxter, *Secret History of RDX*, 84–85.