Unsung star of the space race

Margaret Weitekamp applauds a filial tribute to a woman who helped get the US off the ground

As a mother of three, I’m always hopeful when I see an account of another mother with a professional life as well (It can be done! How did she do it?). But for Mary, as for so many women of the time, her professional life and her family life did not overlap very much. Just as her professional career peaked, she started her family and retired. And this is of course a son’s view, written after her death and without the benefit of her own insights and reflections – assuming she would have shared them if asked. It is a tribute to her previously unheralded contribution and a son’s decade-long effort to restore her mother to her place in history. He succeeded.

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Rocket Girl: The Story of Mary Sherman Morgan, America’s First Female Rocket Scientist
By George D. Morgan
Prometheus, 325pp, £11.83
ISBN 9781616147396
and 7402 (e-book)
Published 9 July 2013

Mary Sherman Morgan raised a fine son. Actually, she raised five children: two boys and three girls. But before she retired to attend to her family full time, she worked as a chemist, first during the Second World War for Plum Brook Ordnance Works, testing the purity of nitric acid used in explosives, and later for North American Aviation, where she invented the liquid fuel hydrazine (the first-stage propellant for the Jupiter-C rocket that boosted the first successful American satellite, Explorer 1, into orbit in 1958). Morgan’s eldest son, George, has written a compelling memoir of his mother’s role as the first female rocket engineer.

But Rocket Girl is not a straightforward biography; it is a detective story, a family tale and a historical reconstruction all blended together with the aim of resurrecting the record of this secretive but significant woman. George grew up to be a playwright, and Rocket Girl first appeared as a stage play produced at the California Institute of Technology in 2008. He describes this book, which draws on that play, as creative non-fiction. Faced with inconsistent family lore and an even more gap-ridden documentary record, he has relied on his dramatist skills to fill in the story. The current holder of North American Aviation’s archival record, Boeing, “chose not to participate” (one senses the frustration in the final Author’s Note), which necessitated the invention not only of dialogue, which would have been lost to history regardless, but also some participants’ names and other details.

The result reads much more like a novel than a history (someone really should option the film rights), offering insights into characters’ thoughts, long exchanges of specific dialogue and vivid descriptions of long-ago settings. The narrative jumps back and forth between Mary’s desperately poor childhood and early professional life, Wernher von Braun’s rocket development in Germany and later in the US (as the architect of the engine that burns Mary’s hydrazine), and George’s dogged research as he tries to uncover the history of the woman who became his mother. The prose occasionally tends towards the purple, with distracting similes. But overall, Rocket Girl draws the reader into a colourful personal account of the development of the space age in the immediate post-war era, with much of its texture restored.

At the centre of it all, of course, is a distant, secretive and possibly obsessive-compulsive woman with a phobia of being photographed, who was nonetheless an accomplished practical chemist and an expert bridge player. The disparate threads of the narrative come together in Mary’s greatest professional accomplishment. In 1957, she worked out how to blend a powerful new liquid propellant mixture to fuel von Braun’s Redstone rocket engine, working within strict limitations already built into the engine’s inalterable construction. The result launched the Americans’ answer to the Soviets’ Sputnik – and began the space race.

Wy Hell Stinks of Sulfur: Mythology and Geology of the Underworld
By Salomon Kroonenberg
Reaktion, 304pp, £25.00
ISBN 9781780230450
Published 24 July 2013

“Wy”, wonders Salomon Kroonenberg, “do astronomers get to study heaven and we geologists hell?” More importantly, is there geological evidence that hell actually exists? In Why Hell Stinks of Sulfur, Kroonenberg embarks on a physical and metaphorical journey to explore the hidden Earth beneath our feet – the subsurface underworld that has done so much to capture our imagination, but about which we still know so little. Using Dante’s circles of hell as a rough guide, and weaving together two seemingly unrelated topics – geology and classical mythology – he takes the reader down through