The British Journal for the History of Science (2024), 1–3
doi:10.1017/S0007087424001249

ESSAY REVIEW

Essay review: the fictive history of Victorian science and empire

Andy Warwick, *Killing Fever*

San Francisco: Virtuoso Press, 2023. Pp. 359. ISBN 978-1-7355423-7-9. £22.00 (paperback)

Jacob Steere-Williams

College of Charleston

(Received 9 October 2024; accepted 9 October 2024)

In 1820 two French scientists – Pierre Joseph Pelletier and Jean Bienaimé Caventou – discovered and named the active alkaloid substance extracted from cinchona bark: quinine. The bark from the 'wondrous' fever tree, and its antimalarial properties, however, had long been known to both colonial scientists and indigenous Peruvians. From the mid-seventeenth century, cinchona bark, taken from trees that grow on the eastern slopes of the Andes, was part of a global circulation of botanical knowledge, practice and profit. By the 1850s, Europeans eager to bypass South American trade routes to access cinchona plants established plantations across the global South in French Algeria, Dutch Java and British India. Wardian cases – plant terrariums named after British physician Nathaniel Bagshaw Ward – would fuel new imperial efforts to curb malaria, contemporaries argued. And yet cinchona trees proved difficult to transport over land and sea, and did not easily or universally thrive in new tropical climates. As a result of the growing demand and uncertainty around cinchona, as Pratik Chakrabarti has argued, from the late eighteenth century there was 'a global scientific obsession' with finding a 'substitute' for cinchona, particularly local alternatives in India and China.[1]

The search for a cinchona substitute, and the broader global entanglement of science and empire in the nineteenth century, sets the dramatic backdrop for Andy Warwick's *Killing Fever*. Readers of the *BJHS* will need little introduction to the breadth of Warwick's scholarly work, particularly his important contributions to the history of nineteenth-century mathematical physics. With this new novel, Warwick propels his scholarly interests outside the academy into the world of narrative fiction. For over a decade it has become mainstream – even mandatory in grants schemes – for historians of science, technology and medicine to centre public engagement as part of our research. This has been an overwhelmingly positive development for the profession, translating

[1] Pratik Chakrabarti, "Empire and alternatives: *Swietenia febrifuga* and the cinchona substitutes," *Medical History* (2010) 54(1), pp. 75–94.

the history of science across a range of platforms and to multiple audiences. But although historians of science have turned to podcasts, blogs, public events and writing narrative-driven historical non-fiction, few have turned to historically informed fiction. *Killing Fever* therefore raises some important questions: what role might fiction have in spurring new research questions? In interrogating historiographical assumptions? In communicating our work to new audiences?

Set in London in 1857, *Killing Fever* follows the complex and dramatic life events of Hyder Khan, a Bengali Santal-born, Western-educated forensic chemist. Stitched up for the murder of his associate, druggist Henry Bullock, Khan is enveloped in a cover-up by East India Company officials, amid the decisions that precipitated the 1857 Rebellion in northern India, which led to the transfer of Company rule to the British Crown. Khan is offered a way out of the murder charges by using his unique skill set to unravel the contents of a small bottle filled with a green liquid. At the centre of the plot is the discovery of a new and potentially lucrative antimalarial plant, *Artemisia chinensis*, secretly tested on a Greenwich hospital ship. This is no implausible leap of imagination. Artemisinin was confirmed to be a powerful antimalarial in the 1970s during the Vietnam War, and was used to protect Chinese soldiers who invaded North Vietnam. Today it is the leading antimalarial drug. Prolific Victorian Scottish botanist Robert Fortune, in his 1857 *A Residence among the Chinese*, described finding a miraculous fever cure while living in the Ningpo region in China.[2] What is more, the economic botany collection at the Herbarium at Kew Gardens, outside London, lists in its archival holdings *Artemisia annua* (K000942071) collected from the garden of Colonel C.M. Wade in 1844. In other words, Warwick's novel presents a plausible story for how knowledge of the antimalarial properties of *Artemisia* might have been recognized in the 1850s, within a faithful account of how the global botanical plant trade for pharmaceuticals was entangled with the politics of empire in the mid-nineteenth-century British world. Khan collides in the novel with the elite men of Victorian science, such as Joseph Hooker at Kew Gardens, and with the global drug trades, not only with cinchona and *Artemisia*, but also with marijuana and cocaine.

Without spilling too much of the intriguing plot, Khan's anti-hero character development is an interesting fictive route into the very real and complicated nature of careering across the British Empire. Khan is an anti-imperial Renaissance man of imperial science; trained in chemistry and forensic toxicology by William Brooke O'Shaughnessy in Calcutta, he moves to London to work with the Liebigian chemist August Wilhelm von Hofmann after documenting the prolific crimes that corrupt East India Company officials and soldiers committed against indigenous Indians during the Santal Rebellion in 1855.

Khan quickly becomes London's leading forensic toxicologist and a member of the Royal College of Chemistry – amid the constant jeers and mistrust of the white elite due to systemic racism. Khan leads multiple lives outside chemistry: he is involved in a sultry affair with the aristocratic Lady Beatrice Montcombe; he is a champion bare-knuckle boxer at Nat Langham's famous Rum-Pum-Pas club at the Cambrian Stores pub near Trafalgar Square. Khan's fate in saving his own life by solving the mystery of what is in the green bottle, and enacting revenge on the empire, is inevitably tied to Adelaide Doyle, a young telegraph specialist, a 'consulting intelligencer', whose stepfather, a professor of chemistry at King's College who is ensnarled with the East India Company, appears dead shortly after Bullock. Doyle's cigar case turns out to be a hidden device to unlock the Vigenère cipher that East India Company officials used for secret communications, like those that sparked the 1857 Sepoy Mutiny.

[2] Robert Fortune, *A Residence among the Chinese: Inland, on the Coast, and at Sea* (London: John Murray, 1857), 102–6.

https://doi.org/10.1017/S0007087424001249 Published online by Cambridge University Press

After news of the mutiny reaches London, Khan comes to represent the face of both rebellion *and* resistance there. Fuelled by another plant of empire, cocaine, and by the atrocities committed against his own Santal people, including his mother, who was raped by East India Company soldiers, Khan squares off in the ring at the end of the novel against his nemesis, the East India Company's bulldog Raikes Elphinstone. In a drug- and rage-induced blur, Khan knocks Elphinstone to death by collapsing his windpipe. But it is unclear to Khan in the moments after whether he accomplished anything other than reifying violence and death.

Before reading *Killing Fever*, I had not thought much about how a historically informed novel might help to push a historiographical boundary that I see my own work advancing: a multi-sited history of science, fusing European spaces, laboratories and materialities with vernacular knowledge, political violence and resistance. But through the genre he calls 'fictive history' Warwick aims to do just that. The novel shines in centring Khan, an Indian chemist, as a trans-imperial detective caught in the middle of a global debate about the direction of the British Empire and the role of botany. It takes Khan's unique skill set in forensic toxicology, his background as a Bengali Santal, and his code-switching ability to fit in at elite gentleman's clubs and dodgy pubs, to solve the murder mystery with enormous stakes for the empire. Throughout the novel, Khan sees chemistry as his personal 'saviour', transforming him above his supposed, colonial-imposed 'savagery'. It is clear too that chemistry is a tool of empire, though in the hands of Khan we see how it also might have been a tool to critique and resist empire. In this way, the fictive Khan's unique life story helps us to rethink the embeddedness of vernacular knowledge.

No monograph has done this better of late than Rohan Deb Roy's *Malarial Subjects*. Deb Roy shows that what we today call malaria was not a 'self-contained category' in the nineteenth century. Instead, he demonstrates, the disease was 'co-constituted with political discourses and practices relating to a network of plants, events, places, drugs and insects'.[3] Warwick's novel, with a different audience in mind, and undoubtedly a different set of goals, brings a similar methodological sophistication to bear on questions of science and empire. *Killing Fever* has a dynamic, almost frantic, pace, one that engenders a new way to think about the global entanglement of science and empire beyond the role that Indians played as 'intermediaries' or experts in vernacular science. Sharply written, the novel might also be useful in the classroom as a tool to help students see the global reach and messiness of Victorian science. Warwick's forthcoming follow-up novel, also featuring Khan and set in 1862 Canada, titled *Richmond 1862*, may also be of interest to historians of science.

[3] Rohan Deb Roy, *Malarial Subjects: Empire, Medicine, and Nonhumans in British India, 1820–1909* (Cambridge: Cambridge University Press, 2017), 3.

Cite this article: Steere-Williams J (2024). Essay review: the fictive history of Victorian science and empire. *The British Journal for the History of Science* 1–3. https://doi.org/10.1017/S0007087424001249