

Is Arsenic an Aphrodisiac?

How many chemical elements could sustain a lengthy book devoted entirely to its role in history?

That arsenic is such a one is amply demonstrated in this book, which is tellingly subtitled “the sociochemistry of an element”. Certainly, presenting the arsenic story requires not only a chemist’s knowledge but also the instincts of a good writer. The author of this book is a chemist whose long career has been devoted to understanding this element, and who has identified a number of the arsenic-containing molecules that abound in the biosphere. He brings his lifetime of experience and strong writing skills to explaining the long history of human interactions with arsenic. Probably no other author could provide this unique perspective or succeed in this task.

The book is almost encyclopedic in its coverage of arsenic, with chapters devoted to its medicinal, homicidal, and suicidal uses and to the role of arsenic in the chemical revolution of the 19th century. The addition of highlighted boxes to the text provides detailed explanations of pertinent topics that complement the narrative. This device ensures that material that would normally be buried in footnotes is easily available to the interested reader. The book is particularly notable for its coverage of three topics. First, the author sorts out the tangled story of Gosio gas and the toxicity associated with dwelling in rooms with moldy arsenic-containing wallpaper. His thesis that Gosio gas (trimethylarsine) is not the culprit is convincing. Second, the book provides an extensive history of arsenical war gases and places their use in the context of the many other war gases developed and used in the First World War. The insights into the motivations of the chemists who developed these chemical warfare agents are especially interesting. It is chilling to read a quotation from Fritz Haber, a Nobel laureate and one of the principals in German chemical warfare, describing the use of poison gas as a higher form of killing. Third, the author recounts the purported connection between arsenic exposure and sudden infant death syndrome (SIDS). In this complex story, it was contended that arsenic present in infant bedding was converted by microbes to a toxic gas that caused SIDS. The persistent belief in a connection between arsenic and SIDS, despite a lack of scientific evidence, is given as an example of arsenophobia, an irrational fear that arsenic in any form or at any level of exposure must be responsible for a plethora of adverse effects.

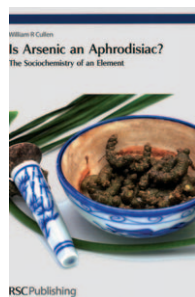
For those interested in arsenic, its chemistry, and its impact on humans, this book will be a delight to read. It neatly complements Andrew

Meharg’s book *Venomous Earth* (Macmillan, 2005) about mass poisoning with arsenic in West Bengal and Bangladesh. In terms of scope and depth of coverage of a single element, this book is reminiscent of Leonard Goldwater’s *Mercury—A history of quicksilver* (York Press, 1972) and will likely become a standard reference source.

David J. Thomas

Experimental Toxicology Division
National Health and Environmental Effects Research Laboratory
Research Triangle Park, NC (USA)

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