

Harold Maxwell-Lefroy and the management of pestiferous insects in urban environments in the early decades of the 20th century

While reviewing Partho Dhang's *Urban Pest Control: A Practitioner's Guide*¹, in *Current Science* reviewer Suresh² says (p. 708):

'This book provides the opportunity for an alternative career option for entomology graduates from agriculture to household pests. ... Most of them look for opportunities to work in fields related to agriculture or chemical industry. This book opens up avenues to take the subject of entomology as an entrepreneurial venture...'

I have not read Partho's book, although I have been alerted of its publication by CABI some months ago. Nevertheless, I thought of bringing to the attention of readers, who may have an interest in entomology and pestology³, some details how the nuisance insects in urban, residential dwellings and colonies were managed using aggressive synthetic compounds in the early decades of the 20th century. Curiously, this piece of information has an Indian connection as well.

Harold Maxwell-Lefroy (1877–1925) was the first, formally appointed Imperial Entomologist of India (IEI), who superintended the Agricultural Research Institute at Pusa (ARIP, later renamed as the Indian Agricultural Research Institute and relocated in New Delhi) between 1903 and 1912 (ref. 4). Before Maxwell-

Lefroy, Charles Lionel Augustus de Nicéville, Curator at the Indian Museum, Calcutta and an avid lepidopterist was the informally appointed IEI for a brief time. In 1913, Thomas Bainbrigge Fletcher (1878–1950) succeeded Maxwell-Lefroy as the IEI. The position of IEI was created by the government led by George Nathaniel Curzon (Viceroy, 1899–1905) primarily to manage (then awkwardly described as 'to control') the populations of pestiferous arthropods in general and those that affected the silk and lac industry in particular. During his tenure as the IEI, Maxwell-Lefroy published *Indian Insect Pests*⁵ and *Indian Insect Life: A Manual of the Insects of the Plains (Tropical India)*⁶.

The vital element that relates to the present narrative comes after Maxwell-Lefroy returned to England in 1913 on accepting the professorship of entomology at the Imperial College, London⁷. During that stint, Maxwell-Lefroy was consulted by Frank Baines, Chief Civil Engineer of the Office of Works, London, to advise him on the techniques of and tools for managing populations of different species of *Xestobium* (Coleoptera: Ptinidae) that were feeding on, and thus damaging, the timber used in the Westminster Hall and in many other rooms of the British Parliament. Maxwell-Lefroy trialled and developed different chemical combinations to regulate the populations of *Xestobium*, some of which proved highly useful. Maxwell-

Lefroy was contacted by several people in London for the compound he produced for application in their residences. From 1924, Maxwell-Lefroy and Elizabeth Eades – his deputy – supplied the pesticide, branded as 'Entokil', producing it in a tiny factory in Hatton Garden (a street in London). In 1925, this factory grew into Rentokil Limited, a commercial firm⁸ (Figure 1). I understand that 'Rentokil Limited' rebranded as 'Rentokil Initial' operates in India since 2017.

Ironically, Maxwell-Lefroy died at a relatively young age of 48 by inhaling the gaseous fumes of 'lewisite' (an organo-arsenic compound), when he was testing its efficacy as a potential pesticide in London in October 1925. Maxwell-Lefroy's unintended 'suicide' is disconcerting. It indeed reminds us the prophetic words of Rachel Carson (*Silent Spring*, 1962) that humans are a part of Nature, and their war against Nature is inevitably a war against themselves.



Figure 1. Public demonstration mobile unit of Rentokil Limited (1950s?). (Source: <https://www.rentokil-pestcontrolindia.com/history/development-of-rentokil>)

1. Dhang, P., *Urban Pest Control: A Practitioner's Guide*, CAB International, Wallingford, UK, 2018, p. 138.
2. Suresh, P., *Curr. Sci.*, 2019, **117**, 708–709.
3. Raman, A. and Narayanasamy, C., *Curr. Sci.*, 2019, **117**, 321–327.
4. Raman, A. and Sharma, A., *Curr. Sci.*, 2013, **105**, 712–716.
5. Maxwell-Lefroy, H., *Indian Insect Pests*, Office of the Superintendent of Government Printing, Calcutta, 1906, p. 318.
6. Maxwell-Lefroy, H. and Howlett, F. M., *Indian Insect Life: A Manual of the Insects of the Plains (Tropical India)*, Thacker, Spink & Co., Calcutta, 1909, p. 786.
7. Felt, E. P., *J. Econ. Entomol.*, 1925, **18**, 848–849.
8. Fleming, L., *The Entokil Man: the Life of Harold Maxwell-Lefroy*, Dexter Haven Publishing Limited, London, UK, 2015, p. 241.

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