

A Small History of Bedbugs in India

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I escaped the sharks
Slew the Tigers
And was eaten up
By the bedbugs
Bertolt Brecht, *Epitaph for M.*
(Mayakovsky, Vladimir, 1946)

Abstract

This paper is an historical account of bedbugs in India. This ‘small history’ of bedbugs dealt with issues like identification of bedbugs in early societies and traced the historical development of the social attitude towards insects like bedbugs, which intruded the domestic and private spaces. By tracing the references of the bedbugs in early Indian literary texts, this paper shows how in the early societies, insects like bedbugs were often confused with other insects and further seeks to understand the dual identification of the bedbugs as the pest and the potion. In colonial India, scientists worked on the insects like bedbugs who they suspect as the vector for tropical diseases like Kala-azar and Oriental Sore. Apart from exploring the scientific world of the colonial scientists, this paper also focuses on the depiction of bedbugs in the stories, poems, and travelogues, etc.

Key words: Bacteriology, Bedbugs, Colonial India, Colonial science, Indian Medical Service, Insecticide and pesticide, Kala-azar, Non-violence, Preventive medicine, Tropical disease

1. INTRODUCTION

The common bedbug, *Cimex lectularius* Linnaeus, first parasitized bats and then switched its host and parasitized humans in some caves near the Mediterranean region (Hickman et al., 1994, p.579). *Cimex*, literally means ‘bug,’ while *lectularius*, referred to a bed or couch. ‘Bug’ itself is an old English word which was used for any strange creature which was small and horrid. As the human societies settle down in the villages and later on in the cities, bedbugs found unending opportunities to infest the human habitats. With increasing pace of transport and penetration of roads and other means of transports even in the remote areas, bedbugs also reached to those areas,

which were previously unfamiliar with the bedbugs. Though bedbugs are non-discriminate in their feeding preferences, poor people were most affected by their infestations as they cannot afford costly extermination process of bedbugs.

According to Panagiotakopulu and Buckland (1999, pp. 908-911), bedbugs are troubling human beings for at least 3550 years. A specimen of bedbug found at Tell el-Amarna in Egypt is the earliest record of the association between man and the bedbug. The presence of bedbug in the Mediterranean region was recorded by Aristophanes, Aristotle, and Dioscorides. With the expansion of commerce and civilization bedbugs spread throughout Europe and Asia. Bedbugs were

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subsequently reported in Italy (77 CE), China (600 CE), Germany (11th century), France (13th century) and England (1583 CE). The post-medieval spread of bedbugs was also made possible by increasing urbanization and improvement in housing quality since the late sixteenth century.

This spread was also manifested in the names by which this bug was identified in Europe and North America, which include ‘bed louse, wall louse, wallpaper flounder, night rider, red coat, mahogany flat and crimson Rambler’ (Potter, 2011, p. 15). Prevalence of the centralized heating systems in Europe provided an opportunity to bedbugs to remain active even during the winter season. Writing in 1954, writers of *The Animal Kingdom* were jubilant over the disappearance of bedbugs and other pests, they wrote, ‘We hear nothing of these insects anymore, for with improved sanitary conditions and improved control measures bedbugs rapidly being wiped out.’ But this jubilation was not long lasting as during the late 1950s and later on, the return of bedbugs and their resistance to drugs like DDT was widely reported (Potter, 2006, pp. 102-104; Bonnefoy et al., 2008, pp. 131-153).

2. BEDBUGS AS POTION, BEDBUGS AS PEST

Over the time, bedbugs are treated both as the pest and the potion. Pliny, in his work *Natural History*, suggested a bedbug ‘cocktail’ for treating snakebites. Similarly, the Greeks and Romans used bedbugs to loosen the hold of leeches, by burning the bedbugs. In the ancient world, people believed that bedbugs, in addition to other insects, could treat many diseases when ingested with wine, beans, or eggs.¹ In ancient Egypt, there was a therapy known as ‘excremental medicine,’ in this therapy ‘droppings of Pelican, hippopotami and flies’ were used. Ancient Egyptians believed that

these *impure* substances would repel ‘bad spirit and dissuade them from remaining in diseased persons.’ In ancient India, too, insect bite was used as treatment. *Kaushika Sutra* gave a detailed description of it (as quoted in Stutley, 1980, p. 34):

To remove the sores fifty-five leaves of the parasu plant (or tree) should be burnt, but first, the leaves are boiled to extract the sap, which is smeared on the sore...the smearing is repeated, this time with powdered shell mixed with the saliva of the dog; the patient is then subjected to the bites of leeches, gnats, and other insects.

(*Kaushika Sūtra*, 30, 14)

Bedbugs were often seen as a nuisance to humankind. To get rid of bedbugs human societies experimented with innumerable methods, from chemicals to segregation. While some individuals like famous Greek philosopher, Democritus believed that ‘hanging the feet of a hare or stag at the foot of bed’ would be enough, some suggested hanging a ‘bear skin or setting a vessel of water under one’s bed would work’ (Potter, 2011, p. 14). The eighteenth century witnessed the rise of new professionals, who called themselves the ‘exterminators.’ These ‘exterminators’ tried to gain authority by associating themselves with the scientific and societal institutions of the eighteenth century. One of the prime examples, in this case, would be, John Southall, who wrote a famous 44-page manual on bedbugs in 1730, known as *A Treatise of Buggs*. After a gap of six decades, this manual was republished in 1793. Southall not only dedicated his work to the President of the Royal Society, Hans Sloane but throughout the manual, he projected himself as an entomologist who knew about the nature of bedbugs. In this illustrated manual, Southall wrote in detail about the bedbugs, their behavior and also advised regarding eliminating infestations (Sarasohn, 2013, p. 514; Potter, 2011, p. 15).

¹ For medicinal purposes, use of bedbugs continued even in the 20th century, for example, the *American Homeopathic Pharmacopoeia* (1896) suggested a ‘tincture’ of *Cimex* (bedbugs) for curing malaria. See, J. R. Busvine, *Insects, Hygiene and History*, London, 1976.

Bedbugs also influenced the history of beds in a significant manner. 'Exterminators' and public authorities recommended that beds should be plain, easy to disassemble, and with the least woodwork, if possible. To treat bedbug infestations, boiling water, arsenic, mercury chloride (also known as corrosive sublimate) and sulfur were used by 'exterminators' in the nineteenth century. These poisons were further mixed with water, alcohol or spirits of turpentine. Later on, pyrethrum was also used. James Whorton (1974) in his study of pesticides and public health in a pre-DDT era noted that 'insecticides have been contaminating the food produced since the introduction of chemical pesticides in the 1860s.'

In the 1920s and 1930s, use of fumigants like hydrocyanic acid (HCN, cyanide) gas also began to treat bedbugs. Though HCN was quite successful, its toxicity was hazardous for humans because breathing the HCN gas caused unconsciousness within seconds and death within minutes. HCN was dangerous and difficult for technicians to control in all spaces, and hence HCN was also referred to as an 'unruly pesticide.' Use of the HCN to treat bedbugs caused several deaths and lethal injuries among the human beings as well (Biehler, 2013, pp. 66-69).

Therefore, in the early 1930s a Switzerland-based firm located in Basel named, JR Geigy SA, began the search for a more effective moth poison. In September 1939, Paul Herman Mueller, staff chemist of JR Geigy SA, found that dichlorodiphenyltrichloroethane (DDT) had extraordinary contact-killing power. In 1941, Geigy SA started testing the possible effectiveness of DDT against lice. Within three years of its discovery, DDT began to be used in agriculture (to treat Colorado potato beetle) and to kill other pests. During the Second World War, Division of Insects Affecting Man and Animals (DIAMA) of the United States Department of Agriculture

(USDA) focused its research on finding repellents and insecticides for lice and mosquitoes, as requested by the military personnel. In May 1943, DDT was recommended by the USDA to armed services as a 'safe and effective' louse powder; DDT residual oil spray for control of flies; and a combination of benzyl benzoate and DDT spray for the treatment of scabies. John Perkins attributed the success of DDT over other insecticides to its technical superiority and socio-political pressures stemming from the Second World War (Perkins, 1982, pp. 3-10). But in a few years, safety concerns arose about the use of DDT and its impact on nature and wildlife.²

During this period bedbugs, lice, fleas also remained a concern in India as well. In 1938, the Indian National Congress appointed the National Planning Committee, to prepare a detailed vision document for planning in India. The Committee began its work in 1939; it had 29 sub-committees. The Sub-Committee on Health in its report suggested that a Mobile Unit should be started which would act as 'delousing plant or fumigation unit against the bedbug, lice, fleas and house pests'(Shah, 1948, p.78). In post-independence India, Dr. Rammanohar Lohia (1910-1967), a socialist leader attacked the use of the DDT in another context. Criticizing Dr. Rajendra Prasad, the first President of India, for washing the feet of two hundred Brahmins in Benares, Dr. Lohia wrote an essay titled as 'The Two Segregations of Caste and Sex,' in January 1953. Lohia argued (Kapoor, 2011, pp. 200-201):

The spirit of which such evil acts are born can never plan the country's welfare nor adventure with joy...It can't improve the country's agriculture or industry, for it is the kin of the dung-heap and the cesspool, which breeds bugs and mosquitoes, although it may well use the DDT around the precincts of the high caste rich. Bugs, mosquitoes, famine and public bathing of Brahmin's feet sustain one another.

² For a detailed description of the negative impacts of the DDT on nature and wildlife, see Rachel Carson, *Silent Spring*, Boston, 1962.

3. BEDBUGS IN EARLY INDIA: BEDBUGS AND THE OCEAN OF STORIES

One of the earliest mentions of bedbugs in ancient Indian literature occurred in *Śiśupalavadham* written by Magha (c. 7th-8th century CE) in the eighth century CE. In a verse written in his masterpiece, Magha compared the two *rakṣasas*, Madhu and Kaitabha, with *matkunā* (bedbugs). In this verse, Magha says that Madhu and Kaitabha, who were furious like bedbugs, were finally killed by Lord Śrī Kṛṣṇa instantly like one would quickly destroy the bedbugs.

matkuṇāviv pura pariplavau sindhunāthśayane niṣeduṣah.

gacchhataḥ sma madhukaitabho vibhoryasya naidrasukhviḡhnatām kṣanam.

Śiśupalavadham, 14.68 (Śiśupalavadham, 1998, p. 748)

Another such reference of bedbugs was found in the *Kathā-saritsāgar*. Somdeva wrote *Kathā-saritsāgara* in the eleventh century CE. *Kathā-saritsāgara* was inspired by and in fact an abridged version of Gunadhya's *Bṛhat Katha*. *Bṛhat Katha* inspired two other works namely, Budhaswami's *Bṛihat Katha Śloka Samgraha* and Kshemendra's *Bṛhat Katha Manjari*. *Kathā-saritsāgara* had a story of the bull abandoned in the forest, and this story further contains a short story of lice (*yuka*) and a bedbug, named *Mandavisarpini* and *Tittibha* respectively.

In the bed of a certain king there long-lived undiscovered a louse, by name *Mandavisarpini*. One day a bedbug, named *Tittibha*, entered that bed. And when *Mandavisarpini* saw him, she said, 'Why have you invaded my home? Go elsewhere.' *Tittibha* answered, 'I wish to drink the blood of a king, a luxury which I have never tasted before, so permit me to dwell here.' Then the louse said to him, 'If this is the case, remain. But you must not bite the king, my friend at unreasonable times; you must bite him gently when he is asleep.' When *Tittibha* heard that, he consented and remained. But at night he bit the king hard when he was in bed, and then the king rose up, exclaiming, 'I am bitten.'

Then the wicked bug fled quickly, and the king's servants did a search in the bed, and finding the louse there killed it.

(‘Shaktiyasha’ *lambak* 10, *tarang* 4) (*Somdeva racit Katha-saritsāgar*, 2011, p. 226)

This story was reproduced in the *Kathā saritsāgara* from the *Pañcatantra*. And later on, the same story appeared in different forms in Indian folktales of various regions as well (see, Gill, 2014). While most of the Hindi translations of *Kathā-saritsāgara*, identified *Mandavisarpini* as lice (*yuka* or *dheel* in Hindi) and *Tittibha* as a bedbug (*khatmal*), C H Tawney who translated *Kathā-saritsāgara* in English, identified *Mandavisarpini* and *Tittibha*, as louse and flea respectively (Penzer, 2001, p. 52). Arshia Sattar (1994, pp.164-165) in her translation of *Kathā-saritsāgara*, identifies *Mandavisarpini* and *Tittibha*, as bedbug and flea respectively. Konrad Meisig (2006, pp. 166-167) identifies *Mandavisarpini* (which he elaborates as ‘slow-creeping one’) as bedbug and *Tittibha* as a flea, because *Tittibha* was referred to as *agnimukha* by *Mandavisarpini*. This confusion in identifying the bedbugs in the early period is also observed by Lisa Sarasohn in her study of bedbugs in early modern England. At least in nomenclature, she argued, bedbugs were often confused with other insects before 1500. She also showed that bedbugs were often referred as ‘wood-lice’ and ‘wall-lice’ in the 16th-17th centuries (Sarasohn, 2013, p. 515).

A K Ramanujan's collection of oral tales, *A Flowering Tree*, consists a story titled ‘Bride for a Dead Man.’ This story contains the elements similar to the stories of Mārkaṇḍeya and Sāvitrī, and it mentioned Śiva referring to bedbugs, in fact, demanding the ‘fat of bedbugs.’ This story is about a king and queen with no children. The king prayed Śiva for twelve years. Finally, Śiva came down from his abode, the Kailāśa, and promised the king that ‘I [Śiva] will come to your house and grant your wish.’ Next morning, when Śiva descended from the sky, he transformed himself into a holy man, and when he reached the market on his way

to king's place, he started begging from place to place. The shopkeepers offered diamonds and pearls to the holy man (Śiva), but he declined to accept them and said 'What shall I do with these stones? If you wish, give me the fat of a flea and the fat of a bedbug, I'd like that'. The Shopkeepers were shocked by his demand and helplessly argued, 'Where shall we go for the fat of fleas and bedbugs?' (Ramanujan, 1997, p. 19).

4. BEDBUGS IN MODERN INDIA

Indian litterateurs of the eighteenth and the nineteenth century mentioned the bedbugs in their writings. In 1730 CE (1787 *samvat*), Ali Muhib Khan 'Pritam', a poet from Agra, wrote a satirical and humorous book in Hindi titled as *Khaṭmal Bāisi* ('Twenty Two verses on Bedbugs'). The *Khaṭmal Bāisi* is the only available text written by 'Pritam'. To create humor 'Pritam' chose bed bugs. Here are few verses from *Khaṭmal Bāisi*, in which 'Pritam' gave a detailed description of the fear of bed bugs (as quoted in Shukla, 2011 [1929], p. 209).

*Jab haray ham hari ke nikaṭ gaye,
Hari monso kahi teri mati bhul chāi hai.
Koi na upaay, bhatkat jani dolai, sun,
Khāt ke nāgar khaṭmal ki duhāi hai.*

(Restless, when I approached Lord Vishnu,
Lord Vishnu told me that you were mistaken.
Do not wander, aimlessly,
The cause of your problem is the bedbugs.)

Famous Urdu poet, Nazir Akbarabadi (1735-1830), who was widely held as 'poet of the people,' was deeply interested in birds and animals. Indeed, Nazir Akbarabadi wrote a poem titled as 'Achar Chuhon ka' (Mouse Pickle), in this poem Nazir talked about preparing a pickle with mouse and other creatures like a bat, crow, frog, etc. (Farooqi, 2012, p. 249)

*...Now think not that just mice will do
Full bushels of bandicoots and moles make this
brew;*

*Bedbugs, mosquitoes, and lice in full measure
A pound and a half of bloodsuckers give pleasure.
How perfectly splendid and nice
This concoction - this pickle of mice!³*

In the late 1830s, Surgeon James Lawder, IMS who was in-charge of Native Infirmary, Madras (a shelter and hospital for leprosy patients) recommended the use of 'iron cots overlaid with closely fitting loose wooden boards.' He reasoned that iron cots should be used as other cots became infested with insects (bed bugs!) and were impossible to clean (Buckingham, 2002, p. 40). Even the design of Indian cots (*cārpāi*) are such that they are particularly suitable for bedbugs to made their refugia in them.

In North India, Urdu poets like Mir Taqi Mir and Mirza Ghalib also complained about bedbugs. In 1827, Mirza Ghalib passed through Allahabad on his way to Calcutta. In Allahabad, he stayed in Daryabad area and in a letter written from Allahabad he complained of being bitten by bedbugs at night and unable to sleep (Mehrotra, 2006). Mir Taqi Mir was so enraged by bedbugs that he wrote (as quoted in Faruqi, 2014):

Finally, my sleep interrupted early
I spend the rest of the night awake and alert to
hunt down the bedbugs.

Famous Oriya novelist, Fakirmohan Senapati (1843-1918), mentioned the omnipresence of the bedbugs in his famous novel *Cha Māna Atha Guntha*, written in 1898. Writing about the 'pious' nature of the landlord, Ramchandra Mangaraj, Senapati [2012, 1959, p. 9] wrote, 'Milk is liquid. And science would not forbid its laws to function in the case of a *zamindar*. Rats, moles, bedbugs, flies and mosquitoes are present in each and every house'.

The last years of the nineteenth century and early years of the twentieth century were also the years of the 'confluence of and the encounter between bacteriology and the colonial world of

³ For more biographical information on Nazir Akbarabadi, see Mohammad Hasan, *Nazir Akbarabadi*, New Delhi, 1983.

tropics'. The tropics were increasingly viewed as the source of disease, death, and discomfort. India was often viewed as 'unclean, unhygienic, and unhealthy' and all this was further linked to the 'social and cultural backwardness of India' (Chakrabarti, 2012, pp. 3-4). The influence of the Pasteurian science was so deep, in the psyche of colonial scientists that they firmly believed in the infallibility and invincibility of the bacteriology against the tropical diseases. Institutes of bacteriology were established throughout India and other colonies. In India, Imperial Bacteriological Laboratory (Mukteswar), Central Research Institute (Kasauli), Pasteur Institutes were established at the places like Coonoor, Rangoon, Shillong, and Calcutta. Similarly, provincial bacteriological labs in Agra, Bombay, and Guindy (Madras) were also established at the beginning of the twentieth century (Chakrabarti, 2012, p. 211).

The King Institute of Preventive Medicine (KIPM), Guindy (Madras) was one of the provincial bacteriological labs. It was established in November 1899 and was named after Lt. Col. W G King (Sanitary Commissioner of Government of Madras). The KIPM started functioning as Vaccine Lymph Depot for manufacturing and supply of smallpox vaccine to the state of Madras.

In 1908, Captain W S Patton, IMS, who was associated with the KIPM, wrote a paper about bedbugs in India, titled as '*Cimex rotundatus*, Signoret.' In this paper, Patton showed his dissatisfaction over the scarce information and research on bedbugs, as he pointed out that 'erroneous statements regarding the habits of this pest (bedbug) still exist in modern text-books on parasitology' (Patton, 1908, p. 153). Patton argued

that among the various species of bedbugs, only *Cimex lectularius*, Linnaeus was well known, and other species like *Cimex rotundatus*, *Cimex macrocephalus* were 'imperfectly known'. Patton started working on bedbugs of Madras, and he discovered that these bedbugs were different from *Cimex lectularius*. Further, he studied the sample of the bedbugs from all over India as well as Burma, Assam and the Malay Archipelago and compared these samples with samples from Island of Reunion and Mauritius.⁴ After this comparative study of the bedbugs, Patton reached to the conclusion that the Indian bedbugs are of *Cimex rotundatus*, Signoret species. According to Patton, while *Cimex lectularius* was found in the temperate zone, *Cimex rotundatus*, Signoret was found in tropical or sub-tropical zones. Patton (1908, p. 155) concluded by observing:

Cimex rotundatus, Signoret breeds throughout the year in India and abounds in all native houses and other places frequented by natives, such as Government office, tramcars, railway stations, and carriages. The bugs are carried about in clothes, bedding, books, and furniture.

At the end of this paper, Patton declared that he would be glad to get specimens of bedbugs from India and other parts of the world, as 'the distribution of *lectularius* in North India requires to be worked out more carefully as well as that of *rotundatus* in Africa where Kala-azar exists.' Explaining the method for sending the specimen of the bedbugs, Patton wrote, 'Bugs are best sent alive in a little tin box, the lid of which has been perforated; dead bugs must be put into spirit' (Patton, 1908, p. 155). Later on, W S Patton worked on the Kala-azar⁵ and Oriental Sore and explored the possible role of bedbugs and other animals in spreading these tropical diseases (Patton, 1913, pp. 185-195; Patton et al., 1921,

⁴ In the nineteenth century, the colonial scientists in India began to communicate with scholars in other parts of Asia, Africa and Europe. They also started the exchange of specimens with museums in Berlin, Denmark. See, Pratik Chakrabarti, *Western Science in Modern India Metropolitan Methods, Colonial Practices*, Delhi, 2004, p. 55.

⁵ Kālā-āzar also called *Visceral Leishmaniasis* is a parasitic disease which infects human beings. It is caused by the protozoan *Leishmania* parasites which are transmitted by the bite of infected female sand fly.

pp. 240-251).⁶ He also did a comparative study of the medical and veterinary importance of arthropods of Mesopotamia (Patton, 1920, pp. 735-750); and further wrote a paper on the salivary secretion of common bloodsucking insects (Patton, 1914, pp. 569-593).

Major F W Cragg, IMS, a close associate of Patton, was also interested in studying the bedbugs of India. They have co-authored a book titled, *A Text-book of Medical Entomology*, which was published in 1913. Cragg was associated with Central Research Institute, Kasauli and was appointed to the special charge of the Entomological Section of the Institute. But, unlike Patton, whose interest in the bedbugs was limited to examine their supposed role in certain diseases like Kala-azar, Cragg was more interested in studying the anatomy and biology of bedbugs. Cragg was also interested in studying and carrying out research in the field on those diseases which were transmitted by an insect vector.⁷ Cragg wrote papers on the reproductive system of bedbugs (Cragg, 1920, pp. 32-79), and also studied the male and female genitalia of bedbugs and fertilization in bedbugs, as well as the alimentary tracts of bedbugs (Cragg and Christophers, 1922, pp. 445-463). In one of his papers on fertilization of bedbugs he remonstrated over the neglect by entomologist of the phenomena related with fertilization in the bedbug. Even those scientists who paid attention to it, like Landois and Berlese, Cragg argued were inaccurate and incomplete in their understanding. Cragg (1915, p. 698) further noted:

For the rest, no one looked for the new and marvelous in so common an insect, and its nocturnal habits, and the circumstances under which it is so commonly met with, assisted in concealing from observation the salient feature of

the reproductive function, namely, the peculiar method of copulation.

Modern researches show that the bed bugs (cimicids) are part of a 'highly specialized hematophagous taxon that parasitizes humans, birds, and bats primarily'. Almost all members of the family feed only on blood, and egg production in adult females requires a regular blood meal. Blood feeding is a necessary precondition for mating in bedbugs as *Cimex lectularius* males chose recently fed females for traumatic insemination (Reinhardt and Siva-Jothy, 2007, p. 352).

Bedbugs live in 'refugia,' which contain bedbugs of different age, feeding stages, and mating status. Digestion rate, environmental temperature, and host availability are three important factors which determine the feeding frequency of bedbugs. Frequent exposure to bed bug bites can lead to an immune response (which often cause discomfort and psychological distress among humans), infections of secondary nature, physiological changes, impact or alteration of the host's reproductive success, and economic costs (Reinhardt and Siva-Jothy, 2007, p. 358). Spiders, pseudoscorpions, solifugids, mites, pyralid moth larvae, assassin bugs, ants, and rodents are some of the predators of bedbugs (Drimmer, 1954, p. 1818).

British officials, European travellers have also recorded their uncomfortable encounters with Indian insects like ant and bedbugs and mosquitoes in their diaries, memoirs, and travelogues (See, Vernede, 1995, pp. 174-199). Likewise, bedbugs and their bloodsucking nature also became part of the popular culture through songs, proverbs, and folktales. Herbert Risley in his book *The People of India* quoted an Indian proverb in the

⁶ Like Patton, Helen Adie also worked on the connection between Kala-azar and the bed bugs. See, Helen Adie, "A Note on Bodies Observed in *Cimex Rotundatus* Linne Collected in a Kala-azar Infected Area in Assam", *JJMR*, Vol. 10, July 1922, pp. 236-238.

⁷ F W Cragg finally shifted his attention to study the prevalence of typhus fever in India. Unfortunately, he was infected by typhus fever and died in 1924.

chapter on caste in Indian proverbs and sayings, which compared the exploitative character of Brahmins with bugs and fleas (Risley, 1915, p. 98).

*Is duniya men tin kasāi,
Pisu, khaṭmal, Brahman bhāi.*

(‘Blood-suckers three on earth there be,
The bug, the Brahman and the flea.’)

While colonial scientists were studying the bedbugs, famous Urdu poet, Akbar Ilaḥabadi (1846-1921)⁸ was annoyed by the bedbugs and spent many sleepless nights because of them. And he wrote wrathfully:

*Is kadar thā khaṭmalon ka chārpai men huzum
Vasl kā dil se mere armān rukhsat ho gaya.*

(There are so many of bedbugs in the bed
That I lost the charm of meeting with my beloved.)

A section of Indian society also faced a dilemma over the killing of insects like mosquitoes and bedbugs. Among the Indian religions which emphasized on the non-violence, Jainism should be particularly mentioned. In Jainism, the vow of non-killing (*ahimsa*) was practiced to the point of absurdity. As historian D N Jha (2006, p. 71) noted:

Even an unconscious killing of an ant while walking was against Jaina morals. The Jaina would not drink water without straining it for fear of killing an insect. They also wore a muslin mask over the mouth not for hygiene but to save any life floating in the air. They were forbidden not only the practice of war but also of agriculture, for both involve the killing of living beings.

In a similar vein, Mahatma Gandhi in a letter written to Shanta S. Patel on December 30, 1930, wrote that “How can anyone say that there is no sin in killing bugs and fleas? Even in cutting up vegetables there is a sin. However, we do

commit some sins which we regard as unavoidable. When we smoke a place to protect ourselves against fleas, countless fleas are killed, but we feel helpless and do that all the same. However, we realize through such necessities that it is everyone’s duty to seek deliverance from bodily life.” (*CWMSG*, XLV, p.40-41)

Rahul Sankrityayan (1893-1963), the Buddhist scholar and traveler, also noted the omnipresence of bed bugs and fleas. In his travelogue, he vividly recorded his encounter with bed bugs and fleas in distant lands like Ladakh and Lhasa (Sankrityayan, 1995, p. 23, 36, 55).

Many of the short stories written by famous Urdu writer Saadat Hasan Manto (1922-1955) contain references to the bedbugs. ‘Ramkhilavan,’ a short story written by Manto on the communal tension in Bombay of 1947, is a good example. Ramkhilavan was a washerman, to whom the writer was familiar for many years. At the beginning of this story, the writer told us that after killing bedbugs, he was looking at some old documents. At the same time he was thinking of how to get rid of the ‘nauseous’ smell (*makruh bu*) emanating from the dead bedbugs that were there in his quarter (*kholi*), and it was then Ramkhilavan, the washerman arrived (Nizam and Acharya, 2006, p. 58).⁹ This ‘nauseous’ smell that Manto was referring to was always associated with the bedbugs and was a cause of annoyance for human beings, apart from the bites of the bedbugs. Lisa Sarasohn in her insightful essay on the bedbugs, which is titled as ‘That Nauseous Venomous Insect’ (a phrase originally used by John Southall), wrote that the most common referent to bedbugs in early-modern texts is their nauseating smell. So much so that the seventeenth-

⁸ Commenting on the role and importance of Akbar Ilaḥabadi in the Urdu literature of the modern India, Mehr Afshan Farooqi wrote that ‘Akbar was the first true post-colonial poet in the sense that he realized how the culture and politics of the colonizer went hand-in-hand and worked as a weapon to destroy and replace the cultural value of the colonized’. See, M. A. Farooqi (ed.), *The Oxford India Anthology of Modern Urdu Literature Poetry and Prose Miscellany*, New Delhi, 2008, p. 3.

⁹ U.R. Ananthamurthy gave a similar description of bedbugs in his novel *Awastha*. see, U.R. Ananthamurthy, *Awastha*, Hindi translation of *Awastha*, New Delhi, 1993, p. 76.

century writer Thomas Tyron (1634-1702) believed that the bedbugs were produced by odors (Sarasohn, 2013, p. 516). The spice, coriander (*Coriandrum sativum* or cilantro) got its name from *coris*, the early Greek term for bedbugs. The coriander was so named because ‘when the leaves and unripe seed are crushed, the pungent smell resembled that of bed bugs’ (Potter, 2011, p. 15).¹⁰

In colonial India, medical experts associated with Indian Medical Service and colonial administrators favored the theory of climatic explanations like heavy rain or change in temperature as an explanation for recurring epidemics. In addition, they favored the “miasmatic” theory which included “poisonous emissions” emanating from ‘rotting vegetation, crowded habitations, and human “filth” of every kind.’ For too long they emphasized on anticontagionism, and refused to accept germ theory at all. Even when Robert Koch, the German bacteriologist, discovered cholera bacillus and conclusively showed the role of water in the spread of cholera, colonial administrators straight away neglected Koch’s findings (Arnold, 1993, pp. 191-95).

5. CONCLUSION

To conclude, this paper sought to explore the history of bedbugs in India. And in this process, we have not only looked at the early literary evidence of the bedbugs in India but also looked into the usage of the insects including bedbugs as a potion, in Indian as well as other medical practices. We have seen in this paper the early association of bedbugs with human societies and with rapid industrialization and speedy mode of transportation the spread of bedbugs over the world. In the early eighteenth century, attempts were made by scientist, quacks, and ‘exterminators’ to eliminate the bedbugs by using

chemicals, ‘secret potions’ etc. (Potter, 2011; Sarasohn, 2013). Further, this paper also depicted, how despite all these attempts to eliminate them, the bedbugs challenged the dominance of human over the natural world, by returning over and over again.

We have also analyzed in this paper, how colonial scientists, like W S Patton and F W Cragg among others, tried to understand not only the anatomy of bedbugs but their possible role in spreading tropical diseases like Kala-Azar and Oriental Sore. In the process of research and experiments, despite facing the resource crunch and dealing with inadequate facilities, these colonial scientists also challenged the long-held views of the European scientists regarding tropical diseases and insects and criticized them for their misunderstandings. In addition to the works of colonial scientists this paper also traced the references to the bedbugs in the modern Indian literary text, and attempted to provide a glimpse of the vivid portrayal of the bedbugs in poems, stories, and travelogues. In the literary evidence, bedbugs were often seen as a nuisance. Further, bedbugs were despised not only for their foul odor but also because of their habit of blood-sucking, infesting, and intruding the domestic space.

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¹⁰ For an incisive historical analysis of the deeper repercussion of the smell in science, society and literature, see Alain Corbin, *The Foul and the Fragrant Odor and the French Social Imagination*, New York, 1986.

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