

# Sherlock Holmes and the Spectre of India: The Adventures of Devil's Foot Root

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*An illustration of Sherlock Holmes and Dr Watson in the December 1892 edition of The Adventure of the Silver Blaze. Source: Strand Magazine, public domain*

The mysterious root poison devil's foot root (*Radix pedis diaboli*), first seen in Arthur Conan Doyle's *The Adventure of the Devil's Foot*, has not yet found its way either into the pharmacopoeia or into the literature of toxicology. Then again, it would not be as famous as it is today if it had instead appeared in the toxicological literature of the time.

The devil's foot root remains fictitious – but it masks historical realities. As Dr Sterndale, the tale's criminal-physician, reports, the poison is found nowhere in Europe “save for one sample in a laboratory at Buda”. The root is semi-anthropomorphised in that it is “shaped like a foot, half human, half goatlike; hence the fanciful name given by a botanical missionary”. According to Dr Sterndale, *Radix pedis diaboli* is “used as an ordeal poison by the medicine-men in certain districts of West Africa”, where it is jealously guarded. The doctor himself found his sample while travelling in “the Ubangi country”.

Through its very definition, the poison conjures spectres of an unseen land and its own unseen presence or liminality, like a ghost, as [Jacques Derrida](#) would say, that “never dies, it remains always to come and to come-back”. One of the ghosts that lurks in the devil's foot root is the idea of the British Indian Empire.

## Empire of toxicology

It is a commonplace error to think of the Victorian administration as a monolithic institution that maintained suzerainty and economic, cultural and administrative hegemony over the landmass of the Indian subcontinent. The British Empire comprised several imperial regimes constituted by its civil services, administration, railways, literary and scientific enterprises. Two such sciences, anthropology and toxicology, were of special interest to Doyle and Holmes.

Three years after the publication of *A Study in Scarlet* (1887), *Pharmacographia Indica: A History of the Principal Drugs of Vegetable Origin, Met Within British India* by William Dymock, C.J.H. Warden and David Hooper, was breaking fresh ground in toxicology. The late Victorian zeitgeist was characterised by the cataloguing of Oriental artefacts, which included botanical, zoological and toxicological specimens.

It is no coincidence that, from the beginning of the Holmesian canon, the detective is handed an apparatus of “retorts, test-tubes and little Bunsen lamps”, where he tests his latest samples of “vegetable alkaloid”. By the end of *A Study in Scarlet*, our interest in the

composition of the alkaloid itself wanes, and is substituted by Holmes' supreme powers of deduction. His brain is the chemical instrument we are (supposed to be) more interested in, as 221B Baker Street is reproduced as a microcosm of the empire of toxicology.

After *A Study in Scarlet* dispenses with the chemical specificity of the alkaloid by calling it a South American arrow poison, *The Sign of the Four* promises to address the void, but doesn't go too far. Tonga, the Andamanese aboriginal who has followed Jonathan Small to London, brings forth his tiny poisoned darts, with which he shoots Bartholomew Sholto.



Members of an unidentified Andamanese tribe fishing, c. 1870. Photo: Wikimedia Commons, public domain

Doyle seemed to have been taken in by the myth that the Andamanese were cannibals who used poisoned arrows to fight British missionaries and civil servants around what later became the penal colony of Port Blair.

However, as the works of Victorian anthropologists Edward Horace Man and Maurice Vidal Portman illustrate, far from being cannibals, the Andamanese were a docile people never known to poison their arrows to target human subjects. Tonga's darts are found to be laced with a powerful vegetable alkaloid that produces instant tetanus and risus sardonicus

After exhausting the South American trope – a region whose ancient tribes did use poisoned arrows for hunting – Doyle had to find an alternate habitat for his poison. The Andamans, having stayed in popular imagination since the assassination of Lord Mayo in

1872, offered itself to the author's experiment. But this choice leaves us with little certainty as to the poison's particulars.

The coincidence of the publication of *The Sign of the Four* and *Pharmacographia Indica* leaves more to be desired in determining the origins of Tonga's alkaloid. As the *Pharmacographia* illumines, it was not the Andamanese but the Himalayan, Assamese and Chinese tribes that used to poison their arrows, with the powdered roots of aconite.

### **Diaboli or indica?**

Tonga's alkaloid poison is not necessarily a substantive toxicological specimen. Instead, it is a prototype of *Radix pedis diaboli*, which in turn is a fictional derivative of *Radix aconiti indica*. Aconite entered the annals of 19th century British science through Danish botanist Nathaniel Wallich's book, *Plantae Asiaticae Rariores* (1830).

European science seems to have derived its knowledge of the plant from medieval Arabic and Persian pharmacological treatises. These in turn had borrowed it from Chinese and 'Hindu' tracts of medicine, especially Mohammad Hossein Aghili's 18th century work, *Makhzan-al-Adwiya*. The question remains, however: what evidence links Doyle's literary invention with *Radix aconiti indica*? And what does this imply in the scheme of the Holmesian canon?

Found in the temperate, sub-alpine Himalayan regions of India, Nepal, Bhutan and China, *Radix aconiti indica* is far removed from the African habitat of the devil's foot root. Nonetheless, Victorian toxicology records some uncanny similarities between Indian poisons and those that Doyle re-territorialised to other habitats.

Aconite was called *bish* in Sanskrit literature – a generic name applied by medics to almost any very-virulent poison. Not all of them referred to aconite, and some species are not fatally poisonous either. However, Indian records exaggerated the effects of aconite to suggest that even its touch could kill. Compare this to the expeditious toxicity of Tonga's darts.

Further, the darts themselves are mimetic reproductions of the legendary arrows poisoned with the aconite root that were, for example, confiscated from Assamese tribespeople in 1884. "Some of the arrow heads were made of iron, others of bamboo; they were covered with a dark brown adhesive mass", made of coarsely powdered aconite rubbed with water to form a precipitate.

The devil's foot root is described as a "reddish-brown, snuff-like powder". *Pharmacographia Indica* describes aconite "as yellowish brown colour, and in shape like a deer's horn". The *Pharmacographia* of 1874 describes them thus: "blackish brown, the prominent portions being often whitened by friction". Evidently, the colour of Doyle's toxicological invention connects two very prominent late 19th century descriptions of Indian aconite.

Similarly, Radix pedis diaboli fumes are described as having “a thick, musky, odour, subtle and nauseous”. The properties of the aconite root included its “offensive odour resembling that of hyraceum or castor”. Already, the fictive transition between the two root poisons evinces some not-so-subtle displacements.



An illustration of Indian aconite (*Aconitum ferox*). Image: Franz Keugen Köhler/Köhler's *Medizinal-Pflanzen*, public domain

Hyraceum – well-known in Victorian pharmacy and perfumery – was the “inspissated urine” of an African animal species, *Hyrax capensis*. It was blackish-brown and its odour resembled that of castor. Hyraceum, castoreum, musk and ambergris belonged to a family of Victorian drugs extracted from India and Africa to use in perfumes and pharmaceuticals.

The fumes of the devil’s foot are nauseating. Nausea was considered one of the first physiological effects of aconite, before the onset of tetanus in case of a fatal dose. Aconite’s hyraceum-like smell turns into the devil’s foot’s musky odour. Aconite’s castor-like smell gets displaced as a ‘thick’ odour of the devil’s foot.

The final straw of this displaced semiotic code between *R. a. indica* and *R. p. diaboli* is the symptoms they produce. Dr Sterndale uses the devil’s foot root as a flammable toxicological weapon, whose fumes could kill anyone who inhales a sufficient quantity.

The aconite root, on the other hand, was not known to Victorians for flammable properties or toxic uses of its fumes.

To find anything close to the flammable effects of the devil's foot, we must turn instead to the symptoms produced by the consumption of aconite leaves. Charles J. Hempel's *Materia Medica* (1859) describes a case of accidental aconite consumption reported by the Dublin Medical Journal, in the previous decade.

A young man who ate aconite leaves by mistake began experiencing, within two minutes, a "burning heat in the mouth, throat, gullet, and stomach ... dimness of sight, stupor and partial insensibility and death". In vaporous form, the devil's foot root produces a parodic version of these symptoms: "victims laughing, shouting, and singing, the senses stricken clean out of them".

When Sherlock Holmes and Watson subject themselves to the fumes, the latter undergoes symptoms of a powerful hallucinogenic effect:

"A thick, black cloud swirled before my eyes, and my mind told me that in this cloud, unseen as yet, but about to spring out upon my appalled senses, lurked all that was vaguely horrible, all that was monstrous and inconceivably wicked in the universe."

What follows is a facsimile of the psychologically paralysing effects of Dartmoor's fog, from *The Hound of the Baskervilles* (1902), that has even Holmes in its thrall. Doyle bypasses the totality of the root's toxicological symptoms. He deflects our attention to its hallucinogenic etiology, instead of a well-defined set of physical symptoms.

Both *R. p. diabolii* and *R. a. indica* kill, and kill quickly. Both cause 'insanity' before death. *R. a. indica* produces a burning sensation before inflaming the gastrointestinal lining, and must be burned in order to produce morbid effects.

So, there are insufficient grounds to claim that the devil's foot root was a wholly fictional fragment of Doyle's imagination. Its spectral epidemiological tentacles are dispersed across the Holmesian canon, prominently in *The Adventure of the Dying Detective*. Here, Holmes nearly dies of an "out-of-the-way Asiatic disease" known as Tapanuli fever.

Whether as reminders of Tonga's darts, Himalayan poisons, tropane alkaloids or Eastern tropical contagions, ghosts of the idea of the British Indian Empire, surveilled and sanitised of invasive threats and all proverbial sunsets, lurk within Holmesian toxicology.

## Conclusion



Arthur Conan Doyle with his family in New York city, April 1922. Photo: US Library of Congress

Doyle quite likely dissociated and displaced key data from the taxonomy of Indian aconite to invent an alkaloid poison in *The Sign of the Four*. This he then rechristened 'Radix pedis diaboli' in *The Adventure of the Devil's Foot*. This is not necessarily to project evidence that the two root poisons are the same. Instead, the theory is a prompt to investigate its veracity in the forums of history of Victorian medicine and pharmacology.

Other than aconite, the devil's foot also resembles varieties of Belladonna, for example. But although the species flourishes in Africa, it comes a distant second to aconite in terms of the physical and chemical properties of Doyle's poison.

What we can conclude is that Doyle's literary imagination was haunted by the spectres of Indian subalternity. As many scholars have reported, the Sherlock Holmes canon masks many moments of unconscious fear over the strategic weaponisation of tropical infections and contagions, brought by imperial traffic, and the threat of the Axis powers appropriating Eastern toxins for biochemical warfare.

Laura Otis sees Sherlock Holmes as an amalgamation of a virologist and an "imperial leucocyte or antibody, sticking closely to the infiltrator he detects". In that, he mirrors the immune system of the empire. Yet the scientific modernity that the immune Holmesian body promises is often subverted by Eastern drugs and toxic substances.

Whether *R. p. diaboli* makes its way into the pharmacopoeia or toxicological literature of any age, it rests in the history of objects and artefacts that the British Empire, and its literature, took from India, even if only to poison those English subjects at home. So while India's ontology is masked or denatured, an Indian 'hauntology' invades the secure corners of England from uncanny quarters.

In his legacy of poisons, Doyle unconsciously left an Indian legacy, unbeknownst to most readers, perhaps even himself.

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