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The pituri plant has long been known for its narcotic properties.

MEDICAL HISTORY

Feeling no pain

John Carmody enjoys an exhibition that charts the trajectory of anaesthesia from its botanical beginnings.

"Publish or perish" is more than a crass modern summary of academic career-building. Without the written or printed word, work can be forgotten for centuries — or even forever.

This message is beautifully underlined in *History of Anaesthesia*, an exhibition on pain relief at the University of Sydney, Australia, that draws on the institution's splendid Rare Books and Special Collections, as well as the equipment museum maintained by the Australian Society of Anaesthetists. Through some 200 books, official reports, quaint and serious apparatus, and illustrations spanning more than five centuries, the show explores the age-old quest to dull agony.

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The exhibits are as much a reminder of this great aspiration as of the panoply of methods — exotic, futile and pragmatic — designed to fulfil it. But it is the books that best reveal the thinking of our intellectual forebears.

History of Anaesthesia
Fisher Library, University of Sydney, Australia.
Until 12 May 2013

Because almost all that is 'physic' is derived from plants — the pain-relieving potions concocted from, say, the opium poppy — the exhibition begins with medical botany as systematized in early 'herbals'. Perhaps the most precious is a book translated from Latin by the English surgeon John Halle. *The herball: an expositive worke after the order of the alphabet*, published in 1565, is actually an extract from Lanfranco of Milan's seminal thirteenth-century surgical treatise *Chirurgia parva*.

Halle, an Elizabethan progressive, championed sourcebooks in the vernacular to promote learning. An important figure as modern medicine began to emerge in England, he summarized his aim as "the edification and building up of good science, and to the subvertion of all haters and abusers of the same".

Among other traditions of botanical medicine, an intriguing Australian example is the little paper "Pituri and Duboisia", which the parasitologist and surgeon Joseph Bancroft read to the Queensland Philosophical Society in 1877. Bancroft refers to the pituri plant (*Duboisia hopwoodii*), widely used by indigenous Central Australians as "a stimulating narcotic".

The renowned German botanist Ferdinand von Mueller, who settled in Melbourne, identified Bancroft's samples and surmised that *Duboisia*'s properties might be similar to the narcotic effect of stramonium, an alkaloid extracted from a plant of the nightshade family and used for centuries to relieve asthma and pain. We learn from the paper that Bancroft, testing it on his domestic pets, found the effects "strange", adding that "they seem blind, or nearly so, with a widely-dilated pupil". Afterwards, while dosing several of his ophthalmic cases, he "found an action of great rapidity" and quickly alerted receptive colleagues elsewhere in Australia. The country's plantations of *Duboisia* species and hybrids still supply around 70% of the global stocks of the alkaloids scopolamine and atropine.

As chemistry developed, the active constituents were purified — crucially for anaesthesia, which was perhaps the most pharmacologically dependent medical speciality. Equally important were fundamental discoveries about atmospheric gases and respiration — both crucial to inhalational anaesthesia. Here, the German-Swedish chemist Carl Wilhelm Scheele's name should be pre-eminent: a 1780 English translation of his *Chemical Observations and Experiments on Air and Fire* is rightly part of the exhibition. He would be better remembered had he not been usurped by Antoine Lavoisier, whom he told how to prepare oxygen (in a letter made public in Paris in 1992).

Beyond revelling in the beauty and nostalgia of remarkable old books, this exhibition reminds us that perhaps no area of medicine relies more than anaesthesia on a diversity of scientific understanding. The modern management of pain — the "perfect misery, the worst of evils", as John Milton described it in *Paradise Lost* — has been an intellectual venture. ■

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