

Moonflowers: Heart-racing Deliriants behind Hanaoka's *Mafutsusan* (Year 1804, Part 1)

For much of the past two millennia, as successive masters of herbal medicine trekked eastward from India to China, Korea, and Japan, they hand-carried or harvested plants of the *Datura* genus, the name of which was derived from *dhatu* (Sanskrit: “white thornapple”). With pale flowers (*left*) opening at twilight, these mysterious “moonflowers,” or “Indian thornapples,” bore spiny fruit (*right*) filled with high concentrations of tropane alkaloids, such as scopolamine, atropine, and hyoscyamine. Ingesting trace amounts could produce rapid heart rates and anticholinergic delirium. Such disruptions in awareness and memory were initially exploited for religious experiences by some, and for medical use by a few of anesthesia’s pioneers, including China’s Hua Tuo (c. 140–c. 208) and Japan’s Seishū Hanaoka (1760–1835). The anticholinergic slurry of such “moonflowers” provided the “brain dulling” portion of a primitive balanced anesthetic. (Copyright © the American Society of Anesthesiologists, Inc.)

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