# NOTES ON CHINESE MATERIA MEDICA.

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*(Continued from page 220).*

## 3.—Strychnos Ignatii, *Bergius.*

ST. IGNATIUS' BEAN.[1]

N.O. Loganiaceæ.

Syn. *Ignatiana philippinica*, Lour., *Strychnos philippensis*, Blanco.

苦菓子 { Cantonese.—*Fu kwo tsz.* Mandarin.—*K'u kuo tzŭ.*

HISTORY &c.—We have been unable to find a reference to this plant, in any Chinese work on either Botany or Materia Medica.

The first account of this drug was given by Father Camelli, the Jesuit Missionary at Manila, as far back as 1699; and, although these seeds have been an article of commerce, in different parts of the world ever since, but little, up to within a few months ago, was known as to their precise origin. In no herbarium in Europe, could specimens of the plant in flower be found; and all modern writers on Materia Medica have been compelled to draw on Blanco and Loureiro, for a description of this important species of *Strychnos*. The plate—No. 179—in Bentley and Trimen's *Medicinal Plants*, is a copy of the figure given in the *Philosophical Transactions* for 1699, which was a reproduction of the rough outlines, attached to the original account of the drug communicated by Camelli to Ray and Petiver, and by them laid before the Royal Society of London, in the same year.[2]

In the list of enquiries relating to Pharmacology and Economic Botany, drawn up in 1871, by Professor Oliver and Mr. Daniel Hanbury, for the *Admiralty Manual of Scientific Inquiry*, we find the following in the section referring to China and the Philippines[3]:—

'St. Ignatius' Beans, called in the Philippines *Coyacoy* or *Pepita de Catbalogan*. The plant, said to be a climbing shrub, to which the name *Ignatia amara* was given by the younger Linnæus, is a species of *Strychnos* probably unknown to modern Botanists. It is believed to grow in Bohol and Cebu, islands of the Bisaya group of the Philippines. As it is one of great interest, no oppportunity should be lost for procuring abundant flowering specimens, as well as the entire fruits, both dried, and

1. Named, on account of their virtues, after St. Ignatius Loyola, the founder of the Society of Jesus. In South America, *St. Ignatius' bean* is a common name of several seeds derived from plants of the N.O. Cucurbitaceæ.

2. *Pharmacographia*, (1879), p. 432.

3. *Science Papers*, by D. Hanbury, F.R.S.; ed., J. Ince, (1876), p. 190.

preserved in alcohol, and some considerable pieces of the stem with bark attached.'

About two years ago, we made strenuous efforts to procure the material necessary for setting at rest all doubts as to the identity of this important drug. Although not completely successful, a distinct advance was made. With the generous assistance of the Rev. Father Vigano, of the Roman Catholic Mission in Hongkong, we succeeded in procuring specimens of the leaves and twigs, and also a portion of the stem and root. Father Vigano also sent us a young tree, but the journey from the Bisayas had evidently been too much for it; for, although it was carefully tended by Mr. A. B. Westland, of the Hongkong Botanic Gardens, it never showed any signs of life.

The leaves in our possession correspond exactly with the description given by Blanco[4] and Loureiro[5]: length, about 5 inches (12-13 cm.); breadth, about 2½ inches (6-7 cm.) The venation, characteristic of the genus *Strychnos*, is well seen in the leaves of this species.

The stem[6] has a diameter of about 3 inches (7-8 cm.): the bark is marked, externally, with numerous warty processes.

While this note was in preparation, we received intelligence that the tree was figured and described, in a recent publication of the Commision de la Flora Forestal de Filipinas; and a copy of the work having now been kindly placed at our disposal by the author, we are glad to find, that everything has been so far satisfactorily settled, as to render further investigation on our part unnecessary.

The description is found in an Appendix to the *Revision de Plantas Vasculares Filipinas*, by Don Sebastian Vidal y Soler, chief of the Commission, published at Manila, in 1886.

As *Strychnos Ignatii* is not known to be indigenous to China Proper, a detailed botanical description would be out of place here. A careful perusal of Don Vidal's account, and an examination of the two accompanying plates, lead us to infer, that no change will be made in the name awarded to this plant, by Bergius, more than a century ago. The characters agree, in every detail, with those required of plants belonging to the genus *Strychnos*.

According to Snr. Vidal[7], the leaves are from 4-10 inches (10-25 cm.) long, and 2-5 inches (5-13 cm.) broad. The fruit is from 4-5 inches (10-13 cm.) in diameter, and may contain as many as 40 seeds.

HABITAT &c.—The author of this *Revision* states that the tree grows on the islands of Samar and Masbate. It is also said to grow in Bohol and Cebu, where it is known by the name of *Coyacoy*. According to Loureiro, it is found in Cochin China, where it is known as *Ho daut gio*, having been introduced there from the Philippines.

The plant and seeds are known, in the Bisaya language, by the name of *Pangaguason*, *aguason*, *canlara*, *mananaog*, *dancagay*, *catalonga* and *igasur*; by the Spaniards of the Philippines, as *Pepita de Bisaya or Pepita de Catbalogan*.[8] In the drug shops of India, the seeds are found under the name *Papita*.[9]

PART USED &C.—The seeds are the only part used in medicine. As met with in the drug shops of Hongkong, they differ, in no respect, from the seeds found elsewhere. The average weight of authentic specimens, from Manila, is 51 grains. The best des-

4. *Flora de Filipinas*, (1837), p. 82.
5. *Flora Cochinchinensis*, (1793), ed. Willdenow, p. 155.
6. Specimens of the leaves, trunk, and root may now be seen in the Museum of the Pharmaceutical Society of Great Britain; and in the Herbarium of the Hongkong Botanic Gardens.
7. *Revision de Plantas Vasculares Filipinas*; S. Vidal; Manila, (1886); Appéndice, p. 449.
8. Blanco, *Flora de Filipinas*, p. 84; also Clain, *Remedios Faciles*; Manila, 1857, p. 610 (from *Pharmacographia*, p. 431).
9. Dymock, *Materia Medica of Western India*, (1st edition), p. 445.

cription, with microscopic drawings, of the fruits and seeds, will be found in a paper by Prof. Fluckiger and Mr. A. Meyer, in the *Pharmaceutical Journal*, (3), XII., p. 1.

The seeds are said to contain 1·5 per cent. of Strychnine, and ·5 per cent. of Brucine. It is not unlikely, that higher percentages would be obtained, by adopting the process, proposed in 1883 by Prof. Dunstan and Mr. Short,[10] for extracting alkaloids from the peculiar horny albumen of such seeds as these. St. Ignatius' beans are generally regarded as being more poisonous than Nux Vomica.

Portions of the bark, detached from the trunk received from the Philippines, have, on analysis, afforded us abundant evidence of the presence of both Strychnine and Brucine.[11]

There has been some confusion, as to the name under which St. Ignatius' beans are met with in China.

In 1861,[12] Mr. Hanbury stated that this drug was known by the Chinese, as 呂松菓 *Lü sung kuo*, i.e. *Luzon fruit*.

In 1871,[13] Dr. Porter Smith stated, that he had not met with the drug, but that it was apparently known to Chinese writers, by the name 苦實把荳 *K'u shih pa tou*. This, it will be observed, is one of the names awarded in the *Pên ts'ao*, to the seeds resembling those of *S. nux vomica*. We have experienced no difficulty in procuring St. Ignatius' beans in Hongkong, where they are known as 苦菓子 *K'u kuo tzŭ*, i.e. *Bitter fruit Seeds*; and this name corresponds with the one given in Tatarinov's Catalogue of Pekin drugs.[15]

Dr. Porter Smith points out, that under the character 松 *Sung*, are to be found the fruits of a species of *Pinus*. We have confirmed his observation in this respect. The confounding of the fruits of some species of *Pinus*, with St. Ignatius' Beans, may be easily explained. The person who furnished the Chinese name of the specimens forwarded to the late Mr. Hanbury, was not acquainted with their real name; but, knowing that they had come from the Philippines, and not wishing to appear ignorant, he called them *Luzon fruits:* a name which would be quite as applicable to the fruit of any tree or plant growing in the Philippines, as to the seeds of *S. Ignatii*. Now for the sound *sung*, the wrong character was affixed; it should be 朱, not 松, which latter character, is, with the Chinese, the generic term for any species of *Pinus*. We can quite understand the native herbalists supplying some part of a Pine tree, when asked for a drug, the name of which, had the character 松, *sung*, associated with it.

Uses &c.—St. Ignatius' beans are not largely used by the Chinese in Hongkong. Many of the native doctors do not know them at all. They appear to enter into the composition of powders &c., for the treatment of cutaneous affections, in much the same way as the seeds of *S. nux vomica*.

10. *Pharmaceutical Journal*, (3), XIII, p. 665.
11. *China Mail*, March 31st, 1887.
12. *Science Papers*, by D. Hanbury, p. 230.
13. *Contributions towards the Materia Medica and Natural History of China*, (1871), p. 116.
14. *China Review*, Vol. XV, p. 220.
15. *Catalogus medicamentorum sinensium*; A. Tatarinov; Petropoli, (1856); No. 248. We are indebted to Mr. E. H. Parker, of Her Majesty's Consular Service, for the perusal of a MS. copy of this excellent little work, the value of which, from a scientific point of view, has been ably demonstrated by Dr. Bretschneider, in his *Botanicon Sinicum*, published in the *Journal of the North China Branch of the Royal Asiatic Society*, Vol. XVI, Part I, p. 123.