# IX. *Note on* Cassia moschata, *H., B., K.* *By* Daniel Hanbury, *Esq., F.L.S.*

(Plate XXVI.)

Read June 18th, 1863.

THE genus *Cassia* as constituted by Linnæus furnishes to medicine, as is well known, two drugs of some importance, namely, *Senna leaves* and the pods called *Cassia fistula*, in connexion with the second of which I beg leave to submit to the Linnean Society the following observations.

Although the name *Cassia fistula*, which is the common commercial designation of the drug, is properly applied to the ripe legumes of *Cassia Fistula*, L., only, it sometimes designates those of *C. brasiliana*, Lam., and, as I shall presently show, those also of a third species of *Cassia*. The legumes of the first-named, which, on account of the laxative saccharine pulp contained between their transverse septa, find a place in many of the pharmacopœias of Europe, are familiar to most botanists; they are straight or slightly curved, cylindrical, smooth, indehiscent woody legumes, $1\frac{1}{2}$ to 2 feet long by $\frac{3}{4}$ to 1 inch in diameter, and of a deep chocolate-colour. The legumes of *C. brasiliana*, which are seen in commerce but rarely, differ from those of *C. Fistula* in being compressed and thicker, and in having two prominent ridges marking their ventral suture and one similar ridge their dorsal; from each suture ramify prominent nerves, giving a rough surface to the legume, which is increased by a cracking and exfoliation of the epidermis. The third form of the drug was distinguished several years ago by Professor Guibourt, of Paris, who described it under the name of *Petite Casse de l'Amérique*, observing that it differs from ordinary *Cassia fistula* in being of smaller size, in containing a pulp of pale colour and austere, astringent, yet saccharine taste, in the seeds being separated by thinner septa, and in the extremities of the legumes being apiculate instead of rounded. M. Guibourt regarded these pods as derived from a variety of *Cassia Fistula*, L., or possibly from a different species. My friend Mr. Morson has also observed some *Cassia*-pods of unusually small size imported into the London market from New Granada, and which were apparently identical with M. Guibourt's drug. In some of them, which he was kind enough to give me, I could detect no differences which appeared sufficient to distinguish them from the legumes of *Cassia Fistula*, L., to which plant I referred them, attributing their slight variation to want of culture or a poor soil. A few months ago, however, Mr. Sutton Hayes, of Panama (to whose kindness I am indebted for many interesting communications), sent me several pods marked *Cañafistola de purgar*, which I recognized as the small variety of *Cassia* of Messrs. Guibourt and Morson. In reply to my remark that they were derived from *Cassia Fistula*, L., Mr. Hayes observed, "I think you are wrong as to the tree which produces the pods I sent you being a form of the true *C. Fistula*. I have often seen both trees; and the true *C. Fistula* is much less like the *Cañafistola*

*de purgar* than many other species of *Cassia*. The flowers of *C. Fistula*, L., are of light yellow and in very long racemes, and the leaflets are different in shape and much larger. The flowers of the *Cañafistola de purgar* are yellow, becoming brick-red with age; the racemes are much shorter than those of *Cassia Fistula*; and the leaflets are altogether different, being much smaller and quite like those of *C. brasiliana*; in fact, the *Cañafistola de purgar* is much nearer *C. brasiliana* than it is to *C. Fistula*. The wood of the tree is very dark-coloured, heavy, and compact, and is considered one of the best on the Isthmus: it makes excellent fuel. The tree is very common in open woods on hills, and is perfectly indigenous; whereas *C. Fistula* is to be found only about towns and in old cleared places, as if introduced. I have never seen *C. Fistula* in the virgin forests. *C. brasiliana* is very common about Panama."

Upon examining Mr. Hayes's plant and comparing it with the species of *Cassia* already described, I have found it to agree with the *Cassia moschata* of Humboldt, Bonpland, and Kunth, so far as the characters of that plant have been recorded; and M. Triana, who is now engaged on the Flora of New Granada, and has compared Mr. Hayes's specimens with the type specimens in Paris, has arrived at the same conclusion. As the notices of this plant hitherto published are quoted entirely from the 'Nova Genera et Species,' the authors of which had not seen the flowers, I have thought it desirable to draw up a complete description, which, with a drawing, I have now the honour of laying before the Society.

CASSIA. Sect. *Fistula*, DC. Subsect. *Ebracteatæ*.

C. MOSCHATA (H., B., K., Nova Genera et Species, vi. 338); arborea; foliolis multijugis, oblongis, apice rotundatis, utrinque pubescentibus deinde supra glabrescentibus, antheris glabris, leguminibus cylindricis.

DC. Prod. ii. 489; Vogel, Synopsis Generis Cassiæ, 11; Walp. Rep. i. 812; *Cathartocarpus moschatus*, Don, Syst. of Gard. and Bot. ii. 453.

*Hab.* Ad isthmum Panama, ubi ab incolis *Cañafistola de purgar* vocatur (*Sutton Hayes*, No. 58); ad fluvium Magdalena (*Humboldt et Bonpland, Triana*); ad ripam fluminis Casiquiare paulo infra ostium superius, arbor unicus ab Orinoco, ubi abundare dicitur, allatus (*Spruce*, No. 3300); ad pagum Villavicencio prope Bogota (*Triana*, No. 4376).

*Arbor* 30–40-pedalis, ramulis novellis flavescenti-pubescentibus. *Folia* alterna, abrupte pinnata, petiolo communi 4–10 poll. longo, pubescente, supra pubescentia ampliore flavescente. *Foliola* 10–18-juga, subopposita vel alterna, oblonga, inæquilatera, basi utrinque rotundata, apice obtusa, interdum mucronulata, reticulato-venosa, $1\frac{1}{2}$–2 poll. longa, 6–7 lineas lata, margine integerrimo, pubescente, nervo medio subtus prominente, pubescente, pagina foliolorum superiore nitida parce et breviter pilosa vel glabrescente, inferiore fuscescenti-pilosa vel puberula. *Stipulæ* triangulares, caducæ. *Racemi* laterales, 6–10-pollicares, simplices, graciles, puberuli. *Flores* flavi, mox rubescentes. *Pedicelli* ad 5 lineas longi, gracillimi, minute pubescentes. *Calyx* quinquesepalus, puberulus vel glabrescens, sepalis rotundatis, obtusis, concavis, reflexis. *Petala* quinque, concava, reticulato-venosa, flava, glabra, subæqualia, semipollicaria; superius ovale, longe unguiculatum, altera suborbiculata, breviter unguiculata. *Stamina* decem, inæqualia, glabra; quatuor inter se æqualia, corolla parum breviora; tria his triplo vel quadruplo longiora, curvata, basi geniculata; tria brevissima, quorum

lateralia incurva, medium filamento crasso, dilatato. *Antheræ* staminum quatuor breviorum ellipticæ, bilobæ, basi et apice biporosæ, dorso medium versus affixæ; antheræ staminum trium longiorum late ellipticæ, birimosæ, introrsum dehiscentes, basi affixæ; antheræ staminum trium brevissimorum birimosæ, tribus supradescriptis haud dissimiles sed valde minores. *Ovarium* longe stipitatum, lineare, adscendens, falciforme, margine superiore basin versus parce pilosum, aliter glabrum. *Stigma* oblique truncatum. *Legumen* cylindricum, rectum, 1–1½-pedale, lignosum, durum, læve, corticatum, breviter apiculatum vel obtusum, septis transversis numerosis ut in *Cassiæ Fistulæ* L. legumine (cui simillimum) instructum. *Semina* ovato-rotundata, compressa, nitida, durissima, 3 lineas longa, coloris cinnamomei, in succo saccharino adstringente immersa.

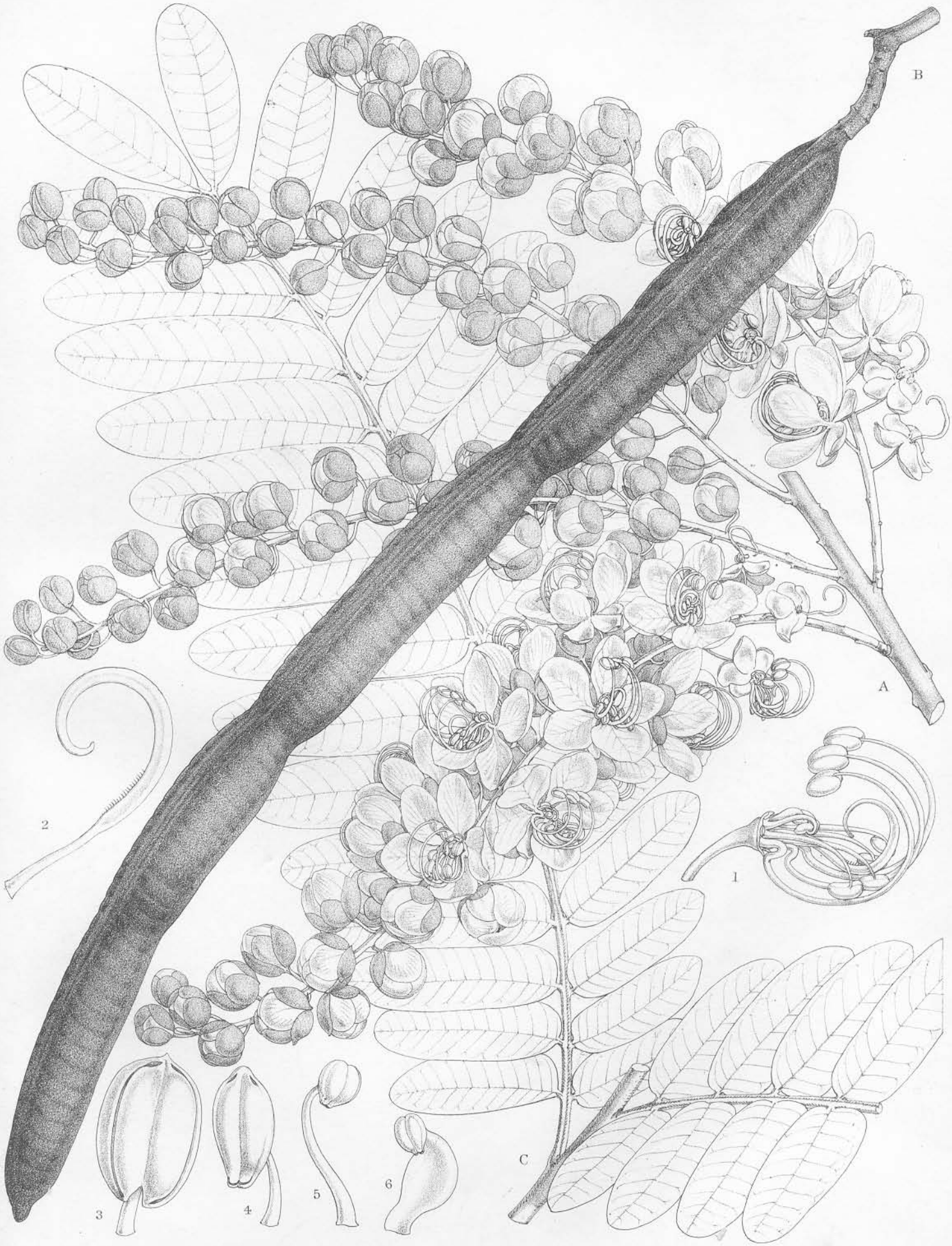
*Cassia moschata*, as remarked by the authors of the 'Nova Genera et Species,' as well as by Mr. Sutton Hayes, is nearly allied to *C. brasiliana*, Lam., but it is easily distinguished from that plant by its comparatively glabrous yellow flowers and its totally different legumes. These legumes are stated by both Mr. Hayes and M. Triana to be used in medicine in New Granada instead of those of *C. Fistula*, L.; so that their occasional appearance in European commerce is not surprising. They differ from the latter by their smaller size, less regularly straight and cylindrical form, and especially by their paler and less saccharine pulp, which, when fresh, is stated to have a slightly musky odour. These characters are of but little value botanically; the leaves, however, of *C. moschata*, its shorter racemes and nearly glabrous ovary, amply suffice to distinguish it from *C. Fistula*, L.

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## DESCRIPTION OF THE PLATE.

### PLATE XXVI.

A, B, C. Flowers, legume, and leafy branch of *Cassia moschata*, H., B., K. (natural size).
Fig. 1. Flower, the petals and sepals having been removed.
Fig. 2. The stipitate ovary.
Fig. 3. Anther of one of the three long stamens.
Fig. 4. „ of one of the four medium-sized stamens.
Fig. 5. One of the two lateral short stamens.
Fig. 6. Central short stamen with inflated filament (all magnified).




W. Fitch, lith.

Vincent Brooks, Imp.

Cassia moschata, H.B.K.