

Jambudvīpa: Apples or Plums?

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One of the common Sanskrit names for India is *Jambudvīpa*. This is commonly translated into English as ‘The Continent (or Island) of the Rose Apple Tree’, a poetically charming expression which evokes idyllic images of a land of trees heavy-laden with sweet, ripe, rosy fruits.¹ This translation is supported by the standard Sanskrit–English dictionary of Monier-Williams, which has:

jambu, °bū, f. the rose apple tree (*Eugenia Jambolana* or another species), ... (°bu) n. the rose apple fruit...²

The St. Petersburg lexicon too identifies *jambu* with *Eugenia jambolana* Lam., adding,

von den Engländern *rose apple* genannt...³

The *Comparative Dictionary of the Indo-Aryan Languages* [Turner 1966, #5131] propagates the same identities: ‘*jambú*...the rose-apple tree *Eugenia jambolana*’. The *Addenda and Corrigenda* to *CDIAL* note under #5136 that *jāmṇu*, the Gaṛhwālī cognate of *jambula*, is a rose-apple. Mayrhofer’s etymological dictionaries make the same identifications between Sanskrit *jambu*, Latin *Eugenia jambolana*, and English ‘the Rose Apple tree’ [Mayrhofer 1953–1972, i.418, Mayrhofer 1986–, i.571]. The same is true of Apte [1992, 728a]: ‘The rose apple tree and its fruit’. In general, then, the dictionary sources most used by Sanskrit translators agree that Sanskrit *jambu* is the *Eugenia jambolana*, Lam., and that this is the ‘Rose Apple’ of English usage.

¹ By no means especially culpable examples include [Basham 1967, 488], [Gombrich 1975, 125] [Caillat 1987, 510], [Dundas 1992, 78], [Klostermaier 1994, 119], [Hardy 1995, 28], and [Fynes 1998, i.7 *et passim*].

² [Monier-Williams et al. 1899, 412].

³ [Böhtlingk & Roth 1855–1875, iii.39a].

In what follows, I shall argue that *jambū* is not the 'Rose Apple', and therefore, India is not the 'Rose Apple Continent'.

I offer this chapter with respect and affection to my distinguished colleague and friend, David Pingree, who has done so much to reveal what Indians thought about Jambudvīpa.

Indigenous Sanskrit sources on the Jambu

The word *jambū* does not occur in the vedic *saṃhitās*, appearing occasionally in the later vedic epic literature, and then with increasing frequency in the epic literature. The name *Jambūdvīpa* is used in the *Mahābhārata*, for example, to mean 'this world'.⁴

The *jambū* is frequently mentioned in the earliest Sanskrit medical texts. Caraka and Suśruta mention it twenty or thirty times each, and it appears in nearly thirty medical recipes in Vāgbhaṭa's *Aṣṭāṅgahṛdayasaṃhitā* [Singh & Chunekar 1972, 164–5]. Its properties are described and its dark colour is alluded to.

The Jambu fruit is heavy, constipating, cold, and strongly excites the wind humour.⁵

[Of a patient bitten by a lethal spider:]

The person's teeth, lips, and mouth are dark, their back and neck bend, and blood the colour of a ripe jambu flows from the bite.⁶

Recipes with jambu are used against diarrhoea, urinary disorders, infant vomiting, earache, against vaginal disorders, wounds, poison, and insect and spider bites. It is often used in combination with mango (Skt. *āmra*, *Mangifera indica*, L.) or catechu (Skt. *khadira*, *Acacia catechu*, L.).

Narahari (fl. ca. 1500), in his famous pharmacopoeia *Rājanighaṇṭu*, describes the *jambu* as a large, dark tree with sweet, fragrant leaves. Its dark blue fruits are worthy of a king, and are much loved by parakeets. Narahari also gives a

⁴ Anuśāsana. 13.110.128a *et passim*, especially in *Bhīṣmaparvan*.

⁵ *jāmbavaṃ guru viṣṭambhi śītalaṃ bhṛśavāṭalam*
Aṣṭāṅgahṛdayasaṃhitā Sū.6.127.

⁶ *śyāvauṣṭhavaktradantatvaṃ pṛṣṭhagrīvāvabhañjanam*
pakvajambūsavaraṇaṃ ca daṃśāt sravati śonitam
Aṣṭāṅgahṛdayasaṃhitā Utt.37.53.

Sanskritized form of the Tamil name of the plant, *nāval*.⁷

Later Sanskrit authors on materia medica continued to describe the Jambu in traditional terms, and also began to distinguish up to five kinds of the tree.⁸

Early foreign notices on the Jambu tree

Chinese diarists such as Faxian (fl. AD 399–414) and Xuanzang (fl. AD 629–645) mention the Jambu tree, and the name *Jambūdvīpa*, as a matter of course.⁹ Clearly the name was in common use from the early centuries of the Common Era.

The Jambu tree was also known to the Muslim traveller and diarist Ibn Baṭṭūṭa, who arrived in north India in AD 1333. Ibn Baṭṭūṭa was an extraordinary traveller, covering over 77,640 miles in the course of his long journeys from his home in Morocco through the Middle East, Iraq, Persia, various parts of Africa, India, the Maldives, Burma, Sumatra, and China.¹⁰ His learned, insightful, and sometimes witty observations are a treasure of information about the territories he visited during the fourteenth-century. At the beginning of his eight years in India, Ibn Baṭṭūṭa travelled to Delhi, and during his narrative of this journey to the Tughluq capital, he took the opportunity to describe the trees he witnessed in North India which differed from those he had seen elsewhere on his travels. He mentions the Jambu tree as follows:¹¹

Next the jambol (*jumūn*). Its trees are large and their fruit is like the olive. It is black in colour and like the olive has one stone.

Ibn Baṭṭūṭa clearly knew the tree at first hand, and had no doubts about its name or identity.

Amongst the earliest European commentators on Indian botanical matters was the sixteenth-century physician Garcia

⁷ *jambūs tu surabhipatrā nīlaphalā śyāmalā mahāskandhā |
rājārḥā rājaphalā śukapriyā meghamodīnī navāhvā ||*

[Purandare 1986, 186], also cited in [Warrier et al. 1994–1996, v.225–6]. On Narahari's date see [Meulenbeld 1999–2002, IIa.265–70]; on the Tamil name, see [Burrow 19612375, #2378].

⁸ [Warrier et al. 1994–1996, 5.228].

⁹ [Watters 1904–1905*passim*], [Legge 1886, 34, 48, 80].

¹⁰ [Husain 1976, liii] gives the estimate of the miles covered by Ibn Baṭṭūṭa. An accessible account of Ibn Baṭṭūṭa's travels is given by [Dunn 1986].

¹¹ [Husain 1976, 17].

da Orta (ca. 1501–68).¹² In the course of his wide-ranging discourses on the medicinal flora of India he speaks of a sharp-tasting olive-like fruit which he calls '*jamboloés*'.¹³

They are called Jambolões and grow in the country on a bush like a myrtle, and [have] leaves resembling those of the arbutus.

Da Orta goes on to claim that the fruit is not considered very wholesome by the people of India. Markham, the learned translator of da Orta's work, notes that this fruit is:¹⁴

Eugenia jambolana, Lam., a Myrtle-bloom. Ibn Batuta also compares the fruit to the olive. It is the 'Black Plum' of Anglo-Indians, and *jambu*, *jamam*, and *jambul*, all meaning 'eatable', 'toothsome', to the people of India.

Da Orta's remarks on this tree are not quite as clear as Markham's precise and accurate note would suggest. As we shall see below, da Orta's account of the tree was open to misinterpretation.

Hendrik van Reede tot Drakenstein (1636–1691) was a distinguished servant of the Dutch colonial service in western India [Heniger 1986]. After building a military career at sea in the 1650s, he participated in the conquest of Malabar between 1658

¹² See [Boxer 1963].

¹³ Translation from [Markham 1987, 236]. Da Orta's Portuguese of this and the following passages reads as follows [da Orta 1563, 121v–122r]:

Chamanse jamboloés he naçem no campo em hũa mata que parece como murta he nas folhas parece madornho mas asi esta fruta como a iaqua não se tem por fruta muito sadiam dagente desta terra mas esta que vos mostro he muyto estimda nesta terra veo de malaqua a esta terra a pouquo tempo porq̃ ha muytos na quesas partes mas dizei a que vos parece este pomo pois he detamanho de hũ houo de pata, e algũ tanto maior jã vedes como acor delle he feito de branco he vermelho, e cheira a aguoia rosada de maneira que aos dous sentidos he apreziuel agora he necesario porq̃ parece bem auista, e ao cheiro que seia ao gosto he porisso prouaio... Em malaqua he chama jambos he asilhe cahmão nesta terra.

The 'arbutus' is a family of fourteen evergreen shrubs and small trees, ranging in height from about 10m to 30m, with smooth red or silver-grey flaking bark and pendant berries, known from Europe, America, and Asia Minor [Griffiths 1994, 86b–87a].

¹⁴ [Markham 1987, 236, n.1].

and 1663, gaining preferment for his actions. During his period as Commander of Malabar, between 1670 and 1677, van Reede began work on a survey of the medicinal and economic plants of the region. This work was eventually published in twelve magnificently illustrated folio volumes, as the *Hortus Malabaricus* [van Rheede 1678–1703]. This work was of such importance that it came to rank equal with da Orta's work of a century earlier as a source of botanical knowledge from the East. Van Reede wrote in Latin, and alongside lavish engravings gave local names of plants in Malayalam, Konkani, and Arabic, as well as Latin. Perhaps most important of all, van Reede cooperated extensively with local experts [Heniger 1986, ch.10]; [Grove 1995, ch.2]. He convened an expert council with a broad membership of Dutch and Malayali specialists. In particular he relied upon the brahmans Ranga Botto, Vinaique Pandito and Apu Botto from Cochin, and more especially the Ezhava physician Itti Achudem from the coastal region of Mouton, all of whom signed statements which were reproduced in the *Hortus*. Perhaps even more valuable for the accuracy of his work was his collaboration with the traditional Keralan collectors of medical plants, the members of the Chogan ('tree climber') community [Heniger 1986, 146].

In volume 5, the *Hortus Malabaricus* describes the *E. Jambolana*:¹⁵

Perin-Njara. Bedṛṣī Brah. Arbor haec Malabarensibus Perinjara seu Inalel, Brahmanis Madanaka, Lusitanis *Graõ do gato*, Belgis *Paters-ballen* nuncupatur. ... Fructus prunorum emuli, oblongor-rotundi, exterius gibbi, interius leviter sinuosi.

Van Reede says the tree is called 'Perin-njara' (in Malayalam) and its fruits, likened to prunes or plums, seem definitely to be those of the Jambu. Inexplicably, however, van Reede asserts that Brahmins call the tree 'Madanaka', not 'Jambu'.¹⁶

Thus, all early commentators—Sanskrit, Islamic, Portuguese, Dutch—describe a large tree with a black olive-like fruit, but da Orta calls it 'Jamboloés' and van Reede calls it the 'Perin-njara'.

¹⁵ [van Rheede 1678–1703, v.29]; [Dalgado 1896, 45–6].

¹⁶ 'Madana' is the Sanskrit name of a medicinal plant, but 'Madanaka' is not. 'Bedṛṣī' is mysterious, but presumably intended to be Konkani.

The Rose Apple

Van Reede describes in the following terms a tree which he calls *E[uenia]. Malaccensis*:¹⁷

Náti-schambu. Bram. jāmbu. Nati-Śchambu, quae altera species Iambu est, ling. Bram. *Shambu*, arbor quoque excelsa. ... Fructus... cum maturi, ad unam partem candidi, ad aliam rubescentes, ac inter candidum colorem striis rubris perfusi.

This is clearly a description of a 'Rose Apple', but it claims that Brahmins call the tree a Jambu, while its name implies that it is a native of Malacca.

Returning to Da Orta, we find that he contrasted 'Jamboloés' with another plant:¹⁸

But this that I show you is much esteemed here. It is not long since it came here from Malacca, where it is abundant. I ask what you think of the fruit. It is the size of a chicken's egg or rather larger. You see that the colour is white and yellow, and the scent like that of rose water, so that both senses are gratified. ... In Malacca the name is Jambos, and it is so called also in this country.

Da Orta liked this tree so much that he planted several in his own garden. He made jam from the fruit and flowers, and he thought the fruit fit for a 'prince of Spain'. Markham notes that this Malaccan tree is,

E. malaccensis, Linn., the 'Malay-Apple' of Anglo-Indians, and *Malaka-jamrul* of Southern India, and known also by the name of *kavika*. The Anglo-Indian 'Rose-Apple' is the *E. Jambos* of Linnaeus.¹⁹

This succinct statement by Markham puts the matter well. It is *Eugenia jambos*, L., a tree with fragrant pinkish fruit, probably imported to India, like *Eugenia malaccensis* L., from SE Asia not long before da Orta's time, which is called the Rose-Apple. And it is the Malaccan import which da Orta is describing as being 'much esteemed'. It is even possible that da Orta does not

¹⁷ [van Rheede 1678-1703, i.18]; [Dalgado 1896, 45].

¹⁸ [da Orta 1563, 121v], beginning 'mas esta que vos mostro...', tr. [Markham 1987, 236-7]

¹⁹ [Markham 1987, 236-7].

distinguish the *E. malaccensis* from the *E. Jambos*, both having been imported from SE Asia, and both having similar fruit with pink, perfumed flesh.²⁰ However, da Orta's statement that the Malaccan tree is called 'Jambos', both in Malacca and in India, has led to confusion ever since.

Just to be clear: the well-known, traditional tree native to India, which figures in Sanskrit *purāṇic* literature and whose Sanskrit name is '*jambu*', is the *Eugenia jambolana*, Lam. All the Sanskrit-English dictionaries cited above are correct on this point. However, the English name of this tree is 'Jambul' or 'Black Plum', not 'Rose Apple'.

Linnaeus' confusion

Why did Linnaeus give the name *E. Jambos* to a tree that was not the India Jambu? Throughout his writings, he makes an effort to echo local traditions of nomenclature in his scientific binomial taxonomy. It seems clear in this case that Linnaeus thought that the Rose Apple of Malacca was indeed the Jambu, and assigned his name accordingly. This suggests that he was using some source which suggested this erroneous view.

It seems beyond reasonable doubt that the source of this view was da Orta. He actually says of the Rose Apple, 'In Malacca the name is Jambos and it is so called in this country'.²¹

But this error is compounded by van Reede, who is one of the principal authorities cited by Linnaeus. Once Linnaeus had given the Latin name *Eugenia Jambos* to the Rose Apple, it was inevitable that non-specialists would draw the conclusion that this tree was the Sanskrit Jambu.

²⁰ There is pervasive confusion in the botanical literature concerning the difference between *E. jambos* (today, *Syzygium jambos* (L.) Alston) and *E. malaccensis* (today, *S. malaccense* (L.) Merrill & Perry [Griffiths 1994, 1136]). Hooker, for example, calls *E. Malaccensis* a 'shrub, 6-8ft high' (1872-97, 2.472) and *E. jambos* 'a moderate-sized tree' (2.474). However, Griffiths [1994] describes the former as 'a tree to 25m', and the latter as 'Bush or small tree to 8m'. Hooker says the former has red flowers, while the latter has white, but many sources do not name the colours of the flowers. Both species are at different times called 'Malay Apple'. It is entirely possible that da Orta's Malaccan tree is in fact the *Syzygium jambos*.

²¹ 'Em malaqua he chama jambos he asilhe cahmão nesta terra.' [da Orta 1563, 122r], tr. [Markham 1987, 237].

	Black plum	Rose apple
Fruit	olive-like, black, staining, astringent	like a small apple, rosy-coloured flesh, perfumed
Latin (former)	<i>Eugenia jambolana</i> , Lam.	<i>Eugenia jambos</i> , L.
Latin (current)	<i>Syzygium cumini</i> , (L.) Skeels	<i>Syzygium jambos</i> , (L.) Alston
Other English	Jambul, Jambolan, Java plum, Jamoon	Jambu mawar
Sanskrit	<i>jambu</i>	(unstable)

Table 1: Nomenclature

Looking back even further, it seems a possible hypothesis that Indian communities in South East Asia named the Rose Apple 'Jambu'.²² That tree, and its emigrant name, were later imported to India during or shortly before the sixteenth century. Both da Orta and van Reede understood their informants to be calling the Malaccan Rose Apple 'Jambu', and here the confusion began.

Due to the modernization of botanical terminology, the revised scientific name for *Eugenia jambolana* Lam. is today *Syzygium cumini*, (L.) Skeels; another English name is 'Jambolan'. Likewise, the current scientific name for the Rose Apple, formerly *E. jambos* L., is *Syzygium jambos*, (L.) Alston; another English name is 'Jambu Mawar'.²³

These variants of nomenclature are summarized in Table 1.

Thus, *E. jambos*, the Rose-Apple, is essentially a foreigner in most of India, and may have been little known before the

²² On the pre-modern Indian diaspora in SE Asia, [Kulke & Rothermund 1998, 143–51, 345] provide an up to date overview and bibliography, and [Frodin 1984] gives an invaluable survey of the botanical writings available for this and all parts of the world. SE Asia is relatively poorly served by botanical literature. The Jambu is unfortunately not mentioned in [Hui-Lin Li 1979].

²³ According to the usually authoritative [Griffiths 1994, 1136]. But the *Index Kewensis* [Royal Botanic Gardens, Kew 1993] appears to use the name *E. jambos* L. as the current name. Such difficulties are common: 'Frequent changes in plant names have brought plant taxonomy into disrepute among plant scientists working in areas other than taxonomy...' [Sivarajan 1991, 215].

sixteenth century, when it reached India from SE Asia. This relatively late arrival in mainland India explains the lack of an established Sanskrit terminology for the tree, and the fact that all common names for the tree, such as the Gujarati *gulābajām̐ba* [Bāpālāla 1968, 580] or the Hindī *gulābajāmūn* [Warrier et al. 1994–1996, v.229], are in New Indo-Aryan languages. The fact that these terms borrow from the traditional name used for the Black Plum is an illustration of the recognized fact that traditional herbalists and vaidyas often succeeded in recognizing family resemblances between plants through their knowledge of plant morphology and medical function.²⁴

Later development

By and large, the confusion that appears in Sanskrit-English lexicons and translations is absent in the literature on Indian economic botany and pharmacology. Thus at the end of the nineteenth century, Dymock et al. identify *E. jambolana* as the tree which symbolizes India: '[the *E. jambolana*, Hindi *Jāmun*, Marathi *Jāmbū*] is one of the four colossal mythic trees which mark the four cardinal points, standing to the south of Mount Méru... Jambudvipa takes its name from this tree', but nowhere do they call this tree the 'Rose Apple' [Dymock et al. 1890, ii.25–6].

Likewise, Watt clearly distinguishes the two plants [Watt 1908, 526]:

- *E. (Zyzygium) Jambolana*, Lam. ...the Black plum, Jaman-plum, jāmbu, jāman, jām, jāmbul, kuda, nāval, nerale, zebri, thabyebyu, etc., and perin-njara, according to van Reede.
- *E. (Jambosa) Jambos*, Linn. ...The Rose-apple, gulab-jāman (i.e., rose-jāman) and nati-schambu, according to van Reede.

However, this clear and correct statement was Watt's second attempt at the problem. In his earlier encyclopedic work, even

²⁴ Sivarajan & Balachandran [1994] offer many examples of the botanical or medical appropriateness of substitute plants chosen by traditional vaidyas when an original is not available.

Watt seems to have been slightly confused. He correctly calls *E. Jambolana*, Lam. the Black Plum, and *E. Jambos*, Linn. the Rose-Apple. However, he wrongly ascribes the Sanskrit name *jambu* to the latter tree, as well as attaching to it the mythological associations concerning the Jambu as the 'world tree', which properly belong to *E. Jambolana*. In spite of this, he is aware that several authorities confuse *E. Jambolana* with the Rose-Apple, since he says, 'the Rose-apple is wrongly referred by Yule, Mason, and other to *E. Jambolana*' [Watt 1972, iii.284-6]. This much is perfectly correct, but Watt is wrong in simultaneously describing *E. Jambos*, the Rose-Apple, as the Sanskrit *jambu*.

It is particularly unfortunate that the widely-used and normally trustworthy *Hobson-Jobson* reproduces all the worst confusions of its sources [Yule & Burnell 2000, 448, 449]. The authors recognise that 'there is great confusion in application, both colloquially and in books', but their own account is unfortunately no less confused.

Other later sources in the genre of economic botany are, generally speaking, clear on this distinction.²⁵

Botanical distribution and description

The botanical descriptions in [Hooker 1872-97, ii. 471, 474, 499], [Griffiths 1994, 1136], [Kirtikar et al. 1987, ii.1049-51] and similar works that are based on direct observation and an involvement with the Indian medico-botanical milieu, make it clear that the tree *E. jambos* L. is uncommon in peninsular India, being indigenous in Burma and SE Asia, (with some specimens in the Sikkim Terai). The *E. jambolana*, on the other hand, is common and generally distributed throughout India, Burma, and Sri Lanka. *E. jambos* is a moderate-sized tree, while *E. jambolana* is of considerable size, and has a thick, crooked trunk. The latter is evidently the more visually striking tree, known throughout India, whose image is used as a traditional symbol of the continent.

However, when we reach botanical texts written merely from secondary sources, without direct exposure to the Indian botan-

²⁵ See, e.g., [Dutt 1980, 165], [Warrier et al. 1994-1996, v. 229] (where the Sanskrit name for the Rose apple is given as *cāmpēya*), [Sivarajan & Balachandran 1994, 188], and [Bāpālāla 1968, 581-6]. [Meulenbeld 1974, 555-6] collects many references.

ical landscape, we find abundant confusion. For example, Mrs Grieve's *A Modern Herbal*, first published in 1931 but still in print, presents a hopelessly conflated account of the two trees [Grieve 1980, 446]. This conflation is also evident in the respected and popular handbook *Potter's New Cyclopaedia of Botanical Drugs & Preparations* by [Wren et al. 1994, 158], which has been in print throughout the twentieth century.

By contrast, even relatively modest guides written by authors with field experience in India, like [Santapau 1993, 100] and [Bole & Vaghani 1986, 59], are clear and correct. In fact, these latter texts do not even mention *E. jambos*, since it is not commonly found in the Indian peninsula even today. Even casual enquiries on the ground in India today produce clear and unambiguous information about the Jambu tree.

We have seen that most botanists are clear about the correct identity of the Jambu. So are the Sanskrit sources on medical botany. So are people living in India. In fact, the only people at all confused about the Jambu today appear to be Western herbalists and Sanskritists trained outside India.

India, therefore, the *Jambudvīpa*, is not the 'Land of the Rose Apple Tree'. It is more correctly the 'Isle of the Jambul', or 'Black Plum Island'.

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