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Comparison of Different Varieties of Jambu as per Ayurvedic Classics with Botany

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Abstract:

The synonyms attributed to the different varieties which describe their morphological characteristics were analyzed. They were compared and tallied with the morphological features of different species of Syzygium genus as mentioned in the regional floras.

Introduction :

Jambu is a popular medicinal plant, very commonly used in Ayurveda. Nighantus explain five varieties of Jambu. They are Mahajambu/Rajajambu, Kshudrajambu, Kakajambu, Bhumijambu and Jalajambuka. The synonyms of these five varieties along with their etymological description were compiled. Then based on these descriptions, they were compared with different species of Syzygium genus mentioned in the regional floras.

Conclusion :

This went a long way in helping not only the traditional Vaidyas in preparing appropriate medicine but also laymen who could make use of this knowledge whenever deemed necessary. Cataloging of plants presumably started at the time of Nighantus which was further furnished by adding various details. However when one compares the modern Botanical approach of identifying a plant, it being more detailed, one feels that the time has come when we should try and analyze the ancient method of describing plant characteristics, bring it on level plane with modern Botany which would help us a long way in identifying the proper drug, its useful part and thus ensure its optimum utility in medicine.

Introduction:

Abstract : Ayurvedic classics have explained about five different varieties of Jambu. Many synonyms have been given to describe the morphology of these varieties. So an attempt was made to establish the identity of these different varieties of Jambu with the help of Botany. The synonyms attributed to the different varieties which describe their morphological characteristics were analyzed. They were compared and tallied with the morphological features of different species of Syzygium genus as mentioned in the regional floras. **Key words :** Jambu, Synonyms, Morphology, Syzygium. **Introduction** Medicinal usage of plants has found its place in the oldest repository of human knowledge ie., the Vedas. The Samhitas which followed Vedas mention about a number of medicinal plants but they lack in the morphological

description of these plants. Acharya Charaka quotes that the knowledge regarding identification of herbs can best be obtained through Shepherds, Cowherds and other forest dwellers who are familiar with the regional flora¹. Then came the Nighantus which gave a brief description of the morphology of plants with the help of synonyms. Different synonyms were given to describe different parts of the plant. These were coined basing on the simile. The main reason of not going into details in this regard has been the close contact with plants growing in the surroundings, thus not necessitating other means of identification. Also the knowledge of Botany was not available for the identification of drugs at that time. So the plant fulfilling the meanings of maximum synonyms was decided upon without any doubt. In later days, the gross and intricate morphological characters of the plants were studied. Based on these characters, plants were classified into various units starting from kingdom to species. Today one feels that Ayurveda lacks in workable morphological descriptions of medicinal plants. In this situation, the etymological information about the synonyms of plants lends some useful clues for resolving the controversies in the identification of drugs. The different varieties of a single drug told in Ayurveda may be closely related species belonging to the same genera. To clarify such doubts, it is necessary to compare and tally the description of plants told in Ayurveda with that of morphological features told in Botany. Jambu is a popular medicinal plant, very commonly used in Ayurveda. Nighantus explain five varieties of Jambu. They are Mahajambu/Rajajambu, Kshudrajambu, Kakajambu, Bhumijambu and Jalajambuka. The synonyms of these five varieties along with their etymological description were compiled. Then based on these descriptions, they were compared with different species of Syzygium genus mentioned in the regional floras. 1. Mahajambu/Rajajambu in comparison with Syzygium cumini (L.) Skeels.

Synonym Description Features of Syzygium cumini (L.) Skeels Mahaskandha It is a tree with a big trunk. A large evergreen tree Surabhipatra³, Gandhapatra The leaves are aromatic. Leaves are aromatic (Terbenthinate odour) Mahajambu Brihatphala⁵ Mahaphala The fruits are bigger in size. Fruit a berry, ovoid, globose or oblong, bigger in size, 1.2-3.8 cm Neelaphala The fruits are blue-black in colour. Fruits turn black purple when ripe Shyamala⁷ Mahaneela Meghamodini⁷ It bears fruits in rainy season. Fruiting in June to August (rainy season) Jambu⁷ That which has edible fruits. Fruits are edible All these characteristics are in accordance with the species Syzygium cumini (L.) Skeels. 2. Kshudrajambu equating with Syzygium heyneanum

Synonym Description Features of Syzygium heyneanum 2 Alpakaha, Vaideshi, Vaidisha⁴ It is a small tree. A large shrub or a small tree Nadeyi, Jalajambuka⁶ Grows on the banks of river / any water source. Frequent in the beds of streams and rivers Deerghapatra⁸, Sookshmapatra⁶ Leaves are longer and smaller in size. Leaves 5-10*1.2-2.5cm, lanceolate or oblong-lanceolate, obtuse or acute at apex, gradually narrowed into the petiole at the base Alpaka⁴, Kshudraphala⁸, Sookshmapala⁸ Fruits are smaller in size. Fruit is a small, oblong berry, 1.2 cm long, often curved The above characters of Kshudrajambu match with those of Syzygium heyneanum / Eugenia heyneana. 3. Kakajambu equating with S.caryophyllaeum / S.caryophyllatum

Synonym Description Features of Syzygium heyneanum 2 Usheerapatri⁴ The term âÂ€Â™PatriâÂ€Â™ here means âÂ€Â™a treeâÂ€Â™. So Kakajambu is a tree, the leaves of which have the fragrance of Usheera moola (root of Vetiveria zizanioides) The leaves of are fragrant. Vanajambu⁴ It is the wild variety, found growing in forests. Common in forests Alpasasyaka¹¹ It is a small shrub. A small tree or a large shrub Kakaphala⁸, Kshudraphala⁴ Fruits are small in size. Fruit is a berry, depressed, globose, 8-10 mm in diameter, about the size of a pea Kakaneela⁷, Neelavarna³, Meghavarna Indicates black colour of fruits or may be bluish colour of the pulp inside. Fruits are purple-black when ripe. Ghanapriya⁷ Fruits appear in rainy season. Fruiting in rainy season from June to August From these features, Kakajambu appears to be S.caryophyllatum. 4. Bhoomijambu equating with Eugenia fruticosa **Synonym Description Features of Eugenia fruticosa** Bhoojambu⁷, Kastajambu⁷ This tree does not grow to a very great height like other trees in the forest, hence the name. A small, much branched tree Hrasva⁸ It is a small shrub, hence the name Short in stature. Hrasvaphala⁸ Fruits are smaller in size. Fruit is a globose berry, size of a small pea. From these features, Bhoomijambu appears to be Eugenia fruticosa. 5. Jalajambu This variety has been mentioned in Bhavaprakasha Nighantu and Nighantu Ratnakara. Bhavaprakasha mentions Kshudrajambu, Sookshmapatra and Nadeyi as the synonyms of

Jalajambuka. This means that Jalajambu and Kshudrajambu are one and the same. Conclusion At present very few scholars are there who are aware about the etymology of the synonyms given to plants. Discontinuation of traditional practice of Ayurveda and negligence over learning Sanskrit are the two main reasons for the deterioration of the knowledge of herbs. About 50% of the knowledge on identification and properties of herbs is achieved by understanding the synonyms. The purpose of giving synonyms in ancient classics was to help people in identifying the plants based on few of their easily identifiable characteristic features. This went a long way in helping not only the traditional Vaidyas in preparing appropriate medicine but also laymen who could make use of this knowledge whenever deemed necessary. Cataloging of plants presumably started at the time of Nighantus which was further furnished by adding various details. However when one compares the modern Botanical approach of identifying a plant, it being more detailed, one feels that the time has come when we should try and analyze the ancient method of describing plant characteristics, bring it on level plane with modern Botany which would help us a long way in identifying the proper drug, its useful part and thus ensure its optimum utility in medicine.

Thus an effort was made to tally the types of Jambu as per our classics with that of Botany. Acharya Agnivesha, Charaka Samhita, Elaborated by Charaka and Dridhabala, with Chakrapani virachita Ayurvedadeepika vyakhya, Edited by Acharya Yadavji Trikamji, Chaukhamba Surbharati Prakashan, Varanasi, Reprinted Edition 2009, Sootra Sthana 1/120 K Gopalkrishna Bhat, Flora of Udupi India Naturalist, Udupi, 1st edition, 2003, page 210-215 Acharya P.V.Sharma and Dr. Guruprasad Sharma, Dhanvantari Nighantu, Chaukhamba Orientalia, Varanasi, 4th edition, 2005, pg 162. Kaiyadeva ni Kaiyadeva, Kaiyadeva Nighantu, Edited by Acharya P.V.Sharma and Dr Guruprasad Sharma, Chaukhamba Orientalia, Varanasi, 2nd edition 2006, Oshadhi varga, pg 65. Madanapala, Madanapala Nighantu, Vaidya Ramaprasad and Rajavaidya Pattiyala, Chaukhamba Publications, New Delhi, 2004 edition, pg 123 Bhavamishra, Bhavaprakasha Nighantu, Edited by Prof.Krishnachandra Chunekar and Dr.Gangasahay Pandey, Chaukhamba Bharati Academy, 2010 edition, pg 558. Pandita Narahari, Raja Nighantu, edited with Dravyagunaprakasika hindi commentary by Dr.Indradeo Tripathi, Chaukhamba Krishnadas Academy, Varanasi, 4th edition, 2006, pg 344. Dattaram Krishnalal Mathur, Shaligrama Nighantu, Khemaraj Krishnadas Prakashan, Mumbai, December 2004 edition, Vol. 7 and 8. Ramesh Bedi, Vanaspati Kosha, Kitabghar Prakashan, Chaukhamba Publications, New Delhi 1st edition 2005 page 410 Bapalal vaidya, Nighantu Adarsha, Chaukhamba Bharati Academy, Varanasi, 2007 edition, Vol 1, pg 581. Acharya Vahata, Astanga Nighantu, Edited by Acharya P.V.Sharma, Sri Kuppaswamy Shastry Research Institute, Madras, pg 23. Acharya Sushrutha, Sushrutha Nighantu, Edited by Dr. Kashiraj Sharma Dwivedi and Dr.Narendra Tiwari, Mahendra Sanskrit University, Nepal, p 95. Medicinal Plants of Bangladesh, www.mpbd.info, www.tropicos.org