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A SUMMARY ON MEDICINAL PLANTS OF JANGALA DESHA WITH RESPECT TO INDIAN ARID ZONE

Murshida Rahman Saikia[1], Kanika Goswami[2]

[1]PG Scholar, Department of Samhita and Siddhant, Govt. Ayurvedic College, Guwahati, Assam, India
[2]Assistant Professor, Department of Samhita and Siddhant, Govt. Ayurvedic College, Guwahati, Assam, India

Corresponding Author: murshidasaikia28@gmail.com

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ABSTRACT

The maintenance of health of a healthy individual and treatment of a diseased person is the pedestal of *Ayurveda*. *Desha* or biological distribution of habitat is one of the important principles linked with health of individuals. For this reason, our acharyas have always pointed the importance of suitable *desha* for collection of the *Aushadhi Dravya*. And so ancient classics have always given importance to *Aushadhi sangrahana* (Drug collection). Because *Sadhya* and *Asadhyata* of *vyadhi* greatly depends on the source of medicinal plants along with their properties. Therefore, in this article an attempt is made to give a glimpse of Indian medicinal plants available in *Jangala desha* with respect to Arid zone.

Keywords: *Bhumi desha, Ayurveda, Guna, Karma, Dravya,* Arid zone

INTRODUCTION

Ayurveda is a holistic discipline that focuses on a person's complete health. This upbeat outlook stems from the reality that where a person is born and raised matters. The same principle requires that the nature of the land be investigated in order to identify the distinctive characteristics of a person. 1. *Desha* is one of the *Pareekshyabhavas* (factors to be studied) that must be dealt with the utmost priority. In turn, in a healthy person it aids in uncovering the susceptible *Nidanas* and hence susceptibility of diseases. Deter-

mining the place of birth and growth of a diseased person gives a clear-cut notion about the prognosis of the condition and thereby aids in treatment protocol. So, fulfils the aims of *Ayurveda* which is "*swasthasyaswasthyarakshanam*" and "*Aturasya-vikaraprashamanam*". The concept of *Desha* in the context of *Dravya Sangrahana* emphasizes the importance of gathering herbs by following certain guidelines to ensure optimal therapeutic outcomes. This also includes gathering herbs from their natural environment and habitat. The air and water coming from specific directions has specific properties. Therefore, *Ayurveda* through different classical texts, divides *Bhumi Desha* into 3 main divisions. Basically *Anupa Desha* (Marshy region), *Jangala Desha* (Dry or Arid Zone) and *Sadharana Desha* (Mixed type or Temperate region).2,3 *Jangala Desha* or Arid Zone is mostly covered with thorns, shrubs, succulents which can survive well in dry lands of Arid or desert climate, without water for days. Therefore, this article is an attempt to bring forward the features of *Jangala Desha* with special reference to the medicinal plants available in *Jangala Desha* along with their *Guna* and *karma.*

AIM AND OBJECTIVES

- To study about *Jangala Desha* with respect to Arid Zone.
- To study about the medicinal plants available in *Jangala Desha*.

Material And Method

- Review of literature related *Jangala Desha* were collected from *Brihatrayi*.
- Modern literature related to the Arid zone was collected from articles and websites related to geography.
- Also, data from available commentaries and research articles are also searched from various authentic digital sources.

REVIEW ON JANGALA DESHA

The flora and fauna of *Jangala Desha* has been mentioned with characteristics by the classical books of Ayurveda.

CHARAK SAMHITA 2

Jangal Desha as per *Charaka* has been said to be, *Paryakash-Bhuyishtha*, meaning it has a clear or open sky. It contains densely developed forests of *Kadar* (Bitstdir), *Khadir*, *Asan* (Vijayasar), *Ashwakarna* (*Sakhua* with expanded leaves), *Pav, Tinish, Salai, Sal, Somvask, Ber, Tendu, Peepak, Vat*, and *Amla* trees along with *Shami, Arjun,* and *Sheesham* trees. Due to the great velocity of wind, which is dry and strong, the branches of these trees tend to move too strongly. The *Mrigamrichika* is read here, and the land is abundant in *Tanu, Khar, Paraush, Sikta* (sand), and *Sharkra (Kankari*). This region is visited by *Lav, Titar,* and *Chakor*. This country is dominated by the *Vata* and *Pitta* Doshas, and the people who dwell here are stable and hard . *Acharya Charak* while describing the *Agraya* substances has said that *Maru* land is a healthy *Desha*. Having been born in a place where people are naturally powerful, such as *Sindh*, where residents are naturally strong. This is due to the unique properties of certain locations. A man's strength is enhanced by his birth in such a location. Disease prevalence rate is low in *Jangala Desha*.

***SUSHRUTA SAMHITA* 3**

As per, *Sushruta*, *Jangala Desha* mentioning that it has open sky, where there are few, small and thorny trees, scarcity of rainfall and water is less in springs, wells, stepwells, etc. The wind is hot and strong. Small mountains are located. People are mostly strong and have delicate bodies, *Vata* and *Pitta* diseases are more prevalent.

ASTANGA SAMGRAHA 4

Jangala desha mostly consists of forests as per *Vagbhat*. Medicines, birds, and humans, which are frequently generated in the *Jangala pradesh*, are generally *Vata-Pradhan*.

ASTANGA HRIDAYA 5

Jangala Desha characteristics are as follows.

Dry places like Bikaner, Jaisalmer, Arab, Africa etc with little or no water and few trees. There are more *Pittaja, Raktaj, and Vaataj* illnesses here.

SARANGADHAR SAMHITA 6

Mentioned that these are countries with little or no water and few trees. There are more *Pittaja, Raktaj, and Vaataj* illnesses here.

HARIT SAMHITA 7

In a *Desha* where there is a wide range of mountains covered with sharp, raucous and thorny, where the land which produces deer and leafless stunted trees stand in the direction, scorching by the intense rays of the sun, the land and ponds have dried up without water, cows and buffaloes fill their stomachs by chewing dry grains, there is no tenderness in the juice and meat, where cold air is not circulating, where there is no cultivation of sugarcane, then there is *raktaja* and *pittaja* disorders. Such a state is called *Jangala Desh*.

REVIEW ON INDIAN ARID ZONE ENVIRONMENT

Indian arid zone is bound on the east by Uttar Pradesh and Madhya Pradesh, on the south by Gujarat and Maharashtra, on the west by Bahawalpur and Sindh. and on the north and north-east by the Punjab. It covers parts of south-eastern Punjab, western Rajasthan, Cutch and north-west of Saurashtra in Gujarat State. The region is almost dry, ill watered and less productive but improves gradually from a mere desert to a comparatively fertile and populated land towards east and north-west. Luni is the principal ephemeral river and carries water only during the short monsoon season. The climate in general is typical of hot dry desert with extremes of temperature and a long period of drought accompanied by high wind velocity and low relative humidity.8 Vegetation in the arid zones is very sparse. The general landscape is desolate and barren. Herbs appear only during a short period of the year when the conditions become favourable. The shrubs, herbs and trees have various means of storing water. The trees are rather few and far between. Vegetation if it is to survive, must become adapted to its environment. Since the availability of water is the most important limiting factor, desert plants show morphological adaptations that enable them to withstand the lack of moisture and prolonged periods of drought. These adaptations include increased ability to store water in their succulent stems or leaves; thickening of the leaf cuticle or reduction of leaf surface or the entire absence of leaves to lower the transpiration rate, and the ability to survive as a seed through many years of aridity.9

Medicinal plants that are found in *Jangala Desha* or Arid zone:10.

Medicinal Plant Sanskrit Name	**Scientific Name**	**Plant Part Used**	***Rasa***	***Guna***	**Virya**	**Chemical Composition**	**Actions And Indications**	**Distribution**
Swetapuspa/ Saireyaka	Barleria Prionitis Linn	*Pancanga, Patra, Puspa*	*Tikta, Madhur, Amla*	*Atisnigdha*		Pottasium	*Kustha, Vatarakta, Kaphaja Roga, Kandu,*	Hotter Parts of India
Raktarka	Calotropis Procera	*Mulatwak, Patra, Puspa, Dugdha*	*Madhur, Mild Tikta*	*Sara, Snigdha, Laghu*	*Usna Virya*	Glycoside,Gaiganteol	*Kustha, Krimi, Kaphahara, Raktapitta, Gulma, Sotha*	Hot And Drier Parts of India
Rohitakah	Tecomella Undulata	*Twak*	*Katu. Tikta, Kasaya*	*Laghu, Ruksha*	*Shita*	Teconnin, Resin	*Relieves Pliha Vriddhi, Rucya, Raktaprasadan*	Punjab, Rajasthan, Gujarat
Chakramardah	Cassia Tora Linn	*Bija*	*Madhur*	*Laghu*	*Shita*	Emodin, Chrysopanic	*Pittavatahara, Relieves Kapha*	Dry Parts of West-

						Acid	*Vyadhi, Swasa, Kustha, Dadru, Krimi*	ern India
Karira	Capparis Decidua	*Mulat-wak, Phala*	*Katu, Tikta*	*Bhedana*	*Usna*	Alkaloids And Glycosides	*Kaphahara, Relieves Arsa, Vrana, Sotha, Swedajanan*	Punjab, Rajputana,
Vastuka	Chenopodium Album	*Patra*	*Madhura, Kshara*	*Laghu*	*Shita*		*Sukrala, Balaprada, Pliha Roga, Raktapitta, Arsa, Krimi, Tridosa Shamak*	Punjab, Himalaya, Kashmir
Saptala	Euphorbia Dracunculoides	*Mula*	*Tikta*	*Laghu*	*Shita*	Euphorbol, Surcose, Glycosides, Sterols and Kaempferol.	*Relieves Sotha, Kapha Vikara, Anaha, Pitta Roga, Udavarta, Rakta Prakopa*	Plains And Dry Hills
Dugdhika	Euphorbia Thymifolia	*Pancanga, Patra, Ksira*	*Katu, Tikta*	*Guru, Ruksha*	*Usna*	Cymol, Carvacrol, Limonine	*Mutrapravartana, Mala Nivaraka, Vrsya,* Relieves *Kapha Vyadhi, Kustha, Krimi*	Through out Warmer Regions of India, Himalayan Range
Atibala	Abutilon Indicum	*Mula*	*Madhura*	*Snigdha*	*Sita Virya*	Asparagin	*Grahi, Vatahara, Rasayana,* Relieves *Mutrakriccha, Vatarakta, Raktapradara*	Through out Hotter Parts of India
Babulah	Acacia Arabica	*Twak, Phala, Niryasa*	*Kasaya*	*Guru, Ruksha*	*Shita*	Flavonoids, Tannin	*Kaphashamak, Grahi, Kustha, Krimi*	Hotter Parts of India
Yavasa	Alhagi Pseudoalhagi	*Pancanga, Yasasarkara*	*Madhur, Tikta, Kasaya*	*Sara, Laghu*	*Sita Virya*	Melizitose, Sucrose	*Kaphaja Vyadhi, Medoroga, Mada, Raktapitta, Kustha, Kasa, Trisna, Visarpa, Vatarakta*	Drier Parts of Kashmir, Punjab, Rajasthan, Gujarat
Dhawah	Anogeissus Latifolia	*Twak, Kandasara, Niryasa*	*Madhura, Kasaya*		*Sita Virya*	Tannin	*Pramedha, Arsa, Pandu, Kaphapitta Shamak*	Punjab, Himalaya
Ingudah	Balanites Aegyptiaca	*Twak, Phala,*	*Tikta*		*Usna*	Saporin, Glycoside, Tannin	*Relieves Kustha, Bhuta, Graha,*	Dry Places of

		Bija, Bija Taila, Patra					*Vrana, Visa, Krimi, Switra, Sula*	India
Raktapuspa Punarnava	Boerhaavia Diffusa	*Mula*	*Tikta*	*Laghu*	*Sita Virya*	Alkaloid (Punarnavine)	*Grahi, Kaphahara, Pittahara, Relieves Raktaja Roga*	Warmer Parts of India
Kunduruh/Shallaki	Boswellia Serrata	*Niryasa*	*Madhura,Tikta, Katu*	*Tikshna*		Gum, Resin	*Kaphavatahara, Sweda, Mukharoga*	Warmer Parts of Central and Peninsular India
Palasah	Butea Monosperma	*Twak, Puspa,Phala, Niryasa*	*Puspa-Madhur, Tikta, Kasaya*	*Phala-Laghu, Ruksha*	*Puspa-Sita Virya , Phala-Usna Virya*	Kinotannic Acid, Galic Acid	*Puspa- Vatarakta, Daha, Kustha , Phala-Prameha, Arsa, Krimi, Kustha, Vatakaphasamak*	Western Himalayas
Bhargi	Clerodendrum Serratum	*Mula*	*Katu, Tikta, Kasaya*	*Laghu*	*Usna*	Saponins	*Ruchya, Pachana, Agnidipak, Relieves Gulma, Raktadosa, Sotha, Kasa, Swasa, Pinasa*	Himalayan Range
Gugguluh	Commiphora Wightii	*Niryasa/Gum Resin*	*Tikta, Kasaya, Katu*	*Vishada, Ruksha, Laghu, Sara*	*Usna*	Essential Oil, Gum Resin, Steroid	*Kapha Vata Hara, Relieves Vrana, Apachi, Medo Roga, Prameha, Asmari,*	Punjab, Rajasthan, Karnataka
Cancuki	Chorchorus Fabcicularis	*Panchanga*	*Madhur*	*Sara, Picchila*	*Sita Virya*		*Rucya, Tridosa Shamak, Dhatupustikara, Bala, Medhya, Mucilageneous*	Dry Parts of Upper Gangetic Plains
Bahuvarah	Cordia Obliqua	*Twak, Phala*	*Madhura, Kasaya, Tikta*	*Ruksha*	*Sita Virya*	Tannin	*Kesya, Visphotahara,Relieves Visarpa, Kustha, Rakta Vikara, Kapha Pitta Shamak*	Warm And Dry Parts of India

Trapusam	Cuccumis Sativus	*Phala, Bija*	*Madhur/ Pakwa Phala-Amla Rasa*	*Guru*	*Raw Phala Sita Pakwa Phala Usna*	Phosphorus, Iron, Vitamin C And B	*Raw- Relieves Klama, Daha, Pitta Samak, Rakta Pitta Hara; Pakwa-Kapha Vata Shamak*	Warm And Dry Parts of India
Akashavalli	Cuscuta Reflexa	*Panchanga*	*Tikta, Kasaya*	*Picchila*		Cusuten, Lactone, Cusutalin	*Akshirogahna, Hrdya, Pitta Kapha Hara, Relieves Ama*	Himalayan Range
Nagarmustakam	Cyperus Rotundus	*Mula*	*Katu, Tikta, Kasaya*		*Sita Virya*	Volatile Oil	*Grahi, Deepana, Pachana, Relieves Kapha, Pitta, Rakta Roga, Krimi*	Warmer Parts of India
Sehundah	Euphorbia Nerifolia	*Mula, Kanda, Patra, Ksira*	*Katu*	*Tiksna, Guru*	*Usna*	Resin	*Agnidipak, Gulma, Udar Roga, Vata Vyadhi, Vrana, Pliha Roga, Kustha*	Dry Rocky Hills of Marwah, Ajmer, Himalayan Range, Gujarat
Duralabha	Fagonia Cretica	*Panchanga*	*Madhur, Tikta, Kasaya*	*Sara, Laghu*	*Sita Virya*	Melizitose, Sucrose	*Kaphaja Vyadhi, Medoroga, Mada, Raktapitta, Kustha, Kasa, Trisna, Visarpa, Vatarakta*	Rocky Places Near Chambal, Punjab
Parushakam	Grewia Asiatica	*Phala, Twak*	*Kashaya, Amla*	*Laghu*	*Usna; Pakwa Phala-Sita*		*Vistambhi, Brimhana, Hrdya, Pitta Shamak, Relieves Daha, Rakta Vikara*	Punjab, Western Himalaya, Mewar
Tulasi Sukla Krisna	Ocimum Sanctum	*Panchana, Patra, Puspa, Bija*	*Katu, Tikta*		*Usna*	Essential Oil	*Hridya, Produces Daha,* Relieves *Kustha, Mutrakriccha, Kapha Vata Hara*	Through out India Warm and Moist

Cangeri	Oxalis Corniculata	*Pan-changa*	*Katu, Tikta*	*Ruksa*	*Us-na*		*Dipana, Rucya, Kaphavata Shamak, Pitta Vardhak, Re-lieves Grahani, Arsa, Kustha, Atisara*	Himala-yan Range
Mudgaparni	Phaseolus Trilobus	*Pan-changa, Mula*	*Tikta, Madhur*	*Ruksha, Laghu*	*Sita*	Sterols	*Sukrala, Chak-susya, So-thagna, Grahi, Tridosahara,* Relieves *Jwar, Daha, Arsa, Atisara*	Himala-yan Range
Bhumyama-laki	Phylanthus Niruri	*Pan-changa*	*Tikta, Ka-saya, Madhur*		*Sita*	Alkaloids	*Relieves Pipasa, Kasaroga, Pitta Roga, Rakta Vikara, Kaphaja Roga, Kandu*	Through out Hot-ter Parts of India
Ghotika	Portulaca Oleracea	*Pan-changa*	*Amla*	*Sara*	*Us-na*		*Kapha Pitta Shamak,* Useful *in Vagdosa, Vrana, Gulma, Swasa, Kasa, Prameha, Sotha, Netra Roga*	Hotter Parts of India Upto Hima-laya
Sami	Prosopis Cineraria	*Twak, Phala*	*Tikta, Ka-tu, Kasaya*	*Laghu*	*Sita*	Phosphorus, Potassium, Cal-cium, Patuli-trin, Resin	*Rechak, Kapha Samak,* Relieves *Bhrama, Kustha, Swasa, Arsa, Krimi*	Dry Parts of Upper Gangetic Plains, Mewara, Punjab, Raja-sthan, Sind, Gujarat
Bala	Sida Cordi-folia	*Mula, Bija*	*Madhur*	*Guru, Snigdh a, Pic-chila*	*Sita*	Ephedrine, Hypaphorine	*Balya, Ra-sayana, Vrsya, Prajasthapana, Vatapitta Shamak,* Re-lieves *Raktapit-ta, Prameha, Pradar, Vata Vikara, Vrana*	Hotter Parts of India
Kakamaci	Solanum Nigrum	*Pan-changa*	*Tikta, Katu*	*Snigdh a*	*Us-na*	Alkaloids, Sap-onins	*Tridosaghna, Swarya, Sukrala, Ra-*	Western Himala-yas Upto

							sayan, Netraya, Useful in *Sotha, Kustha, Arsa, Jwara, Prameha, Hikka, Chardi, Hridroga*	9000 Ft
Macika	Tamarix Gallica	*Mula, Patra, Macika (Kita Kosa)*	*Amla*	*Laghu*	*Sita*	Tamavixin, Gallic, Tannic, Sodium Sulphate	Relieves *Rakta Pitta, Kapha Dosa, Kantha Roga*	Sandy And Gravelly Roads of Hotters Parts of India
Gokshura	Tribulus Terrestris	*Mula, Phala*	*Madhur*	*Laghu*	*Sita*	Alkaloids, Saponins, Nitrates, Volatile Oils	*Bastisodhana, Dipana, Vrisya, Pustikaraka,* Useful in *Asmari, Prameha, Swasa, Kasa, Arsa, Mutrakriccha, Hridroga, Vata Hara*	Warmer Regions of India
Sahadevi	Verononia Cinerea	*Mula*	*Tikta*	*Laghu, Ruksha*	*Sita*	Seeds Contain Oil	*Swedajanan, Krimighna, Sothahara,* Useful in *Jwara, Arsa, Sotha*	Warmer Parts of India Upto Himalaya
Aswagandha	Withania Somnifera	*Mula*	*Tikta, Kasaya*		*Usna*	Alkaloids, Withanolides	*Kapha Vata Hara, Useful in Switra, Sotha, Ksaya,* Acts as *Balya, Rasayana, Atisukrala*	Through out The Drier Parts of India
Karkandhu	Zizyphus Nummularia	*Phala*	*Amla, Tikta, Kasaya, Madhura*	*Snigdha, Guru; Dry-Laghu*	*Sita*		*Vatapitta Shamak,* When Dry It Acts as *Agnivardhak,* Useful *in Trishna, Klani, Raktaja Roga*	Dry Arid Regions of Punjab, Rajasthan, Gujarat, Kutch

DISCUSSION

Jangala desha, due to extremely dry condition of the soil and natural arid environment, biosphere has predominancy of *Agni. Vayu and Prithvi Mahabhootas* in turn produce plants containing *Kashaya, Katu and Tikta* sap. And thus, the medicinal plants available here, are mostly seen to be having the above rasa

along with either *shita virya or usna virya*, along with *laghu, ruksha and snigdha guna*. So, these plants can be used in treating vyadhi of Anupa desha, which are mostly *kaphaja vyadhi* and *kaphaja prakriti* people.

CONCLUSION

The knowledge about these medicinal plants available in *jangala desha* with respect to Arid zone can be well implemented in treatment procedures of certain diseases like *Prameha, Arsa, Krimi* and *kustha*. Most of them have *kaphahara, vatahara* and *rakta vyadhihara* properties.

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