

# ECOLOGICAL AWARENESS

## ENSHRINED IN THE ANCIENT WISDOM



**Prof. K. V. Suresh**  
**Dr. T.G. Sreekumar**



ECOLOGICAL ASWARNNESS  
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## CLASSIFICATION OF PLANT KINGDOM IN THE VEDIC LORE.

*Dr. S. Sheeba*

India, the land of Vedas is embellished by the beauty of its diverse physiological forms. The captivating topography makes this country unique among other world nations. The rich physiography of India, the snow clad and enormous Himalayan mountains from which originated the huge rivers like Indus, Ganges and Brahmaputra, the expansive and fertile Northern plains, extensive plateaus like Malwa, Decan and Chottanagpur as well as the scorching deserts like Thar desert make India incredible with its natural beauty. This in turn leads to designate India as an Agricultural country .

As we know the Indian subcontinent was full of thickly grown forests since it was situated within the monsoon belt and had sufficient rainfall. More over our land is surrounded by water bodies on its three sides. The rich Vegetation is enumerated as a hall mark of our country. Hundreds of rivers traversing in different parts of India also helped to keep the greenishness of our land the fertile soil also promote the growth of trees. There were a collection of trees, bushes, climbers, creepers, herbs, shrubs and other sun loving plants struggling to establish and survive themselves. Various animals, birds, insects etc move into this natural habitat and thereby create a fully balanced ecosystem, a compendium of air, water, soil, light, heat, animal kingdom and plant kingdom.

All our ancient tradition exuberantly praises the glory of Nature. R̥gveda, the first recorded monumental work of humankind while describing the order of creation, portrays that plants had preceeded animals in the scale of arrival of living beings on earth.

*Ya oṣadhīḥ pūrva jātā devebhyaḥ triyugam purā. (R̥v x 97.1)*

Our ancestors treated plants and animal as the major components to maintain the ecological balance of nature. They always treated nature as the ultimate source providing all livelihoods to lead a peaceful

life on this earth and admitted the surrounding as part of them. More over plants played a major role in the religious life of ancient people. They succeeded in understanding and identifying the medicinal properties of various plants which lead to the progress of Ayurveda, the ancient Indian system of medicine. There are evidences in Mohenjo-Daro Harappa civilization that reflect the role of plants and plant products in trade and commerce.

The practical interest shown by ancient Indian people, whether it is religious, agricultural or commercial, provided a well acquainted knowledge of plant kingdom. Even though Botany was not a well developed and well studied branch in ancient India, one can trace glimpses of the modern ideas of plant life in our treatises.

The Saga of Sanksrit literature provide ample evidences to the nature of plant life and allied knowledge. The hymns of Rgveda and Atharvaveda illustrate a good number of plants. An account of medicinal plants can be traced from the Ayurvedic treatises of Caraka, Susruta and Vāgbhata. Many of the Purāṇas also proclaim the glory of plants. For example in the Agnipurāṇa and in the Brhatsamhitā of Varāhamihira there are separate chapters on Vṛkṣāyurveda. The Gulmavṛkṣāyurveda portion of Kauṭilya's Arthaśāstra gives an account of botanical wisdom in connection with cultivation and storage of the vegetables under the guidance of an officer called Sītādhyakṣa. Kauṭilya describes his qualification in a well defined manner as he should know the science of Agriculture, Horticulture and Botany or to be assisted by experts who are aware of these facts.

Plant Kingdom in India is very extensive. The absence of Botanical treatises in ancient times made it difficult in finding out the exact principle based on which our sages classified the plants. But a close examination of the various treatises will reveal that the classification of plants in ancient India attained great importance. An elaborate description of plants under several heads based on their structure, colour, quality, shape and so on are presented in the ancient wisdom. On the basis of the available information in these texts scholars have arrived at the conclusion that the random classification of plants had been done based on three major facts.

- |              |    |             |
|--------------|----|-------------|
| 1. Botanical | ie | Udbhidādi   |
| 2. Medicinal | ie | Virechanādi |
| 3. Dietetic  | ie | Annapānādi  |

(Dr Shiv Shekhar Mishra, Fine arts and Technical sciences in Ancient India with Special Reference to Someswara's Manasollasa. Krishnadas academy, Delhi, 198, p.121)

Later Aristotle, who is designated as the father of Biology attempted to classify the members of plant kingdom and Animal kingdom. Alexander the loyal disciple of Aristotle presented his master a variety of plants that he came across during his encounters. It is also believed that the botanical collection of Aristotle consists of Indian Cardomam and Pepper.

Another famous disciple of Aristotle and Greek philosopher Theophrastus is the first one who classified plants into various groups. He is known as the father of Botany. This classification is mainly based on the properties, internal structure, method of reproduction etc. a more developed and scientific form of plant classification is presented by the Swedish scientist Carl Linaeus. Details of Linnaeus classification is presented in his book-'Systema Naturae'. (ശാസ്ത്രം എത്ര ലളിതം, Vol. IV, Edited by Prof. S. Sivadas, D. C. Books, 2012. p. 26)

The modern classification of plant Kingdom is based on the following three criteria

1. Plant Body

Whether the body possesses well differentiated structure or not

2. Vascular system

Whether the plant body has vascular system or not

3. Seed Formation

Whether they bear flowers and fruits or not

### Classification of Plants in Ṛgveda

Ṛgveda devotes one whole sūkta the Oṣadhisūkta. for the description of the significance of plants. Several hymns discuss the

various types of plants. The major terms used in this Veda to represent them are Oṣadhi, Vṛkṣa, Vīrudh, Tṛṇa etc.

The common words used for denoting trees in R̥gveda are vṛkṣa and Vanaspati -Vīrudh is generally used to express shrub or creeper. All grasses are separately classified in R̥gveda as Tṛṇas

Another R̥gvedic classification of plants is on the basis of flowers and fruits. Plants bearing flowers are classified as Puṣpiṇī or Puṣpavati. Flowerless plants are grouped under Apuṣpa or Prasuvarita. They are classified as fruitful or phalinaḥ and barren or aphaḷā on the basis of producing fruits. Each and every plant has given its own space and importance on R̥gveda. There it is prayed that whether bearing flowers or flowerless plant being the progeny of Bṛhaspati may liberate us from sin.

Yāḥ phalinīryā aphaḷā apuṣpa yāśca puṣpiṇīḥ

Bṛhaspatiprasūtaḥ stā no mucyantvamhasāḥ (R̥.V.X.97.15)

This kind of classification portrayed in R̥gveda are connected each other and shows close similarity to the modern classification plant kingdom under the following heads

1. Cryptogamia. ie flowerless plants.

Plants which do not produce flowers with stamens or pistils and are reproduced by spores which are one celled and contains no embryo

2. Phanerogamia

Plants that produce flowers with stamens or pistils or both. They are further reproduced by seeds which are multi celled and contains an embryo

### Classification of Plant kingdom in Atharvaveda.

Atharvaveda, which is more closely related with the medicinal properties of plants provides a well developed system of classification of plants. The hymns of Atharvaveda very legitimately represent the classification of plants on the basis of colour, quality, structure, shape, utility and place of growth.

On the basis of colour, plants are divided under the following heads-*Bahrū* (Gray), *Śukra* (white), *Rohiṇi* (Red), *Asikni* (Blue) and *Kṛṣṇa* (Black)

*Ya bahravo yāśca śukrāḥ rohiṇīrut pṛsnayaḥ*

*Asikniḥ kṛṣṇa oṣadhīḥ sarva ācchāvadāmasi.* (A.V.8/7/1)

Based on quality, plants are grouped as-

1. *Jīvalā*- plants provide life
2. *Nāgarīṣa* - Plants that are harmless
3. *Jīvantī* -Plants that are capable of securing their own life
4. *Arundhatī* - plants that render internal strength
5. *Unnayanti* - plants that stimulates energy production
6. *Puṣpā* - Flowering plants
7. *Madhumatī*-Plants having nectar.

*Jivalam nā garīṣam jīvantīmoṣadhīmāham*

*Arundhatīmunnayantīm puṣpam madhumatimiha huvesma aristatataye.* (A.V 8/7/6)

In accordance with structure a more developed and scientifically accepted classification is presented in Atharvaveda as follows-

1. *Prastṛṇī*-Plants having different branches
2. *Stambinī*- plants with pillar like structure
3. *Ekaśuṅgā* - Plants having one root
4. *Pratanvatī*-Plants with multiple roots
5. *Aṃsumatī*-plants bearing thorns
6. *Kāṇḍinī*- Plants in which the stem is divided
7. *Viśākhā* -Plants that are devoid of branches.

*Prṣṭṛṇī stambinīmekaśuṅga pratanvatīroṣadhīravadamī*

*Aṃsumatīḥ kāṇḍinīrya viśākhāhvayāmi te vīrudho*

*Vaiswadevirugraḥ prusajivaniḥ.* (A.V.8/7/4)

According to the shape plants are classified under five major divisions. They are-

1. *Vṛkṣa*-trees



2. *Taru*-shrubs
3. *Tṛṇa*-grass
4. *Latā*-climbers and
5. *Pratāna* -creepers. A.V 8/7/20

A careful examination of ancient Indian classification of plants share some amazing similarities with modern and are very close to our daily life . For example plants bearing flowers and fruits are generally grouped under *Vṛkṣa* like Mango tree and plants bearing fruits without flowers are *Vanaspatis* as Jack fruit tree and Pippal tree.

Ancient Indian Scholars are aware of the very fact that each and every being play its own role in the ecosystem in which they exist. They even used plants to identify the presence of water in certain waterless regions. All these firmly affirm the role of plants in the formation of ecosystem. The growth of each form of life will ultimately attain the equilibrium only if the plant population on earth is vigorous . Hence one should always keep in mind the very reality that in order to restore our bio-diversity we should be the protector and trustee of the valuable plant wealth. Vedic people not only understand the importance of plants in the various walks of their life but also acted as protectors of plant kingdom .While composing treatises on human wisdom they provided ample space to describe and discuss plants, plant products, proper management of the plant wealth and preservation of plants .In tune with these matters vedic scholars classify the plant wealth highlighting their role and status in human life. *Ṛgveda* depicts only a random classification of plants while *Atharvaveda*, which discusses the medicinal and other properties of plants describes different types of classification of a great verity of plants.

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