



Available Online at EScience Press

Journal of South Asian Studies

ISSN: 2307-4000 (Online), 2308-7846 (Print)

<https://esciencepress.net/journals/JSAS>

LEXICAL BOTANY IN *AMARAKOŚA*

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ABSTRACT

Sanskrit literature abounds in lexicons. *Amarakośa* is the most celebrated and authoritative ancient thesaurus of Sanskrit. There are references to various lexicons in many ancient Sanskrit texts, but none of these except for Dhanvantari's and *Amarasiṃha*'s are extant. Between the two, the latter's work *Nāmaliṅgānuśāsana* popularly known as *Amarakośa* is very familiar to every student of Sanskrit. The actual name of the book '*Nāmaliṅgānuśāsana*' means instruction concerning nouns and gender. It is divided into three *kāṇḍas* (volumes). Each *kāṇḍa* is divided into *Vargas* depending on the subject they deal with. A list of more than 220 plants is mentioned with all the synonyms in the four *Vargas*. The plants that are revealed in the *Amarakośa* can be classified into huge trees, edible fruit trees, shrubs, herbs, creepers, water plants, grasses, pulses, cereals, wild cereals and others. Plants that are generally used for incensing, perfumery and cosmetics for human consumption are mentioned in the *Manuṣhya Varga*. In the *Vaiśyavarga* crops of commercial value are included.

Keywords: SanskritLexicons, *Amarasiṃha*, *Amarakośa*, Botanical terms, Flora, Plants.

INTRODUCTION

Sāyaṇācārya in his *R̥gvedabhāṣyopākrama*, defines *Nighaṇṭu* as, "a book where the same meaning - synonymous- words are considered as a group". *Amarakośa* is the most celebrated and authoritative ancient thesaurus of Sanskrit. There are references to various lexicons such as those of Kātyāyana, Vācaspati, Vyāḍi, Vararuci, Bhāguri, Dhanvantari, *Amarasiṃha*, etc., in many ancient Sanskrit texts, but none of these except for Dhanvantari's and *Amarasiṃha*'s are extant. The word '*Amarakośa*' is derived from the Sanskrit words '*amara*' (immortal) and '*kośa*' (treasure, casket, pail, collection, and dictionary). It is one of the books which an Indian child learning through the Indian traditional educational system memorizes as early as his first year of formal learning. Though it appears as a linear list of words, close inspection of it shows a rich organization of words expressing various relations a word bears with other words. Thus when a child studies *Amarakośa* further, the

linear list of words unfolds into a knowledge web.

AMARASIṂHA - THE AUTHOR OF *AMARAKOŚA*

Amarasiṃha, the renowned scholar, is the author of the ancient lexicon '*Amarakośa*', which is clear from the colophon.¹ This is the only information about *Amarasiṃha* that we get from *Amarakośa*. He didn't mention any information about him anywhere in *Amarakośa*.

Date and Life of *Amarasiṃha*

Very little is known about the date and life of *Amarasiṃha*. King Vikramāditya (4th century A.D.) points out in the *Subhāṣita* that *Amarasiṃha* was one among the nine gems (*Navaratnāni*) in his court. On the basis of all these, it seems fair to assign a date around 450 A.D. for *Amarasiṃha*. According to Katre (1948), however, *Amarasiṃha*'s date is not certain.

Classification of *Amarakośa*

The *Amarakośa* is divided into three *kāṇḍas* (volumes). Every *kāṇḍa* is divided into *Vargas* (parts) depending on

the subject they deal with. These *kāṇḍas* are described in detail in the next section. *Amarakośa* contains a total of 11,580 content words from the three *kāṇḍas*. Unique words from all *kāṇḍas* are 9,031. It is not certain how many were originally written by Amarasimha and how many have been interpolated at a later stage. Kṣīrasvāmin's commentary (Oka 1913) mentions 1,498 *ślokas* as original and 58 as interpolations. Balasubramanya (1970) includes 1,540 as original *ślokas* without any interpolations.

Prathama(1st) Kāṇḍa

The first *kāṇḍa* ² contains *svargavargaḥ* (heaven), *vyomavargaḥ* (sky), *digvargaḥ* (direction), *kālavargaḥ* (time), *dhīvargaḥ* (cognition), *śabdādivargaḥ* (sound), *nāṭyavargaḥ* (drama), *pātālabhogivargaḥ* (nether world), *narakavargaḥ* (hell), and *vārivargaḥ* (water).

Varga contents

Svargavargaḥ: Heaven, Gods, Demons, their arms, ornaments, symbols or vehicles, and other attributes, Fire, Air, Velocity, Eternity, etc.

Vyomavargaḥ: Sky

Digvargaḥ: Directions, Deities of the directions, elephants at the points, their female elephants, Cloud, thunder, lightning, rainbow, Rain, hail, rainy day, cloudy day, Moon, types of light, frost, Stars, Planets, sunset, dawn, sunlight, etc.

Kālavargaḥ: Time, day, night, variations of the moon, eclipse, second, hour, months, year, Weather, seasons, Happy, Sorrow, Soul, Mind, etc.

Dhīvargaḥ: Individuality, consciousness, knowledge, sense, organs, tastes, fragrance, colours, etc.

Śabdādivargaḥ: Sarasvatī, voice, word, Vedas, Vedāṅgas, stories, legends, sound, types of sounds, speech, musical sounds, song, ornament's sound, etc.

Nāṭyavargaḥ: Seven musical tones, Musical Instruments, dance, theatrical characters, sentiments, desire, affection, kindness, Festival etc.

Pātālabhogivargaḥ: Infernal region, hole, darkness, Snakes, kinds of the serpent, parts of the snake, etc.

Narakavargaḥ: Hell, various hells, departed souls, pain, etc.

Vārivargaḥ: Water, Ocean, wave, whirlpool, shore, channel, island, boat, voyage, pilot, deep, fish, fisherman, net, fish basket, hook, etc., types of fishes, Aquatic animals, crab, turtle, etc. Well, pond, types of ponds, River, Names of rivers, water plants, lotus, water lily, etc. and parts of these plants.

Dvitiya (2nd) Kāṇḍa

It is divided into ten Vargas or parts ³. They are *bhūmivargaḥ* (earth), *puravargaḥ* (towns or cities), *śailavargaḥ* (mountains), *vanauśaddivargaḥ* (forests and medicines), *simhādivargaḥ* (lions and other animals), *manuṣyavargaḥ* (mankind), *brahmavargaḥ* (priest tribe), *kṣatriyavargaḥ* (military tribe), *vaiśyavargaḥ* (business tribe) and *śūdravargaḥ* (mixed class).

Varga contents

Bhūmivargaḥ: Earth, land, soil, clay, world, India, regions, types of lands, country, village, kingdom, hill, road etc.

Puravargaḥ: City, suburb, Market, fort, wall, house, kinds of houses, parts of house, house holdings, building land, etc.

Śailavargaḥ: Mountains, kinds of mountains, parts of mountains, caves, etc.

Vanauśaddivargaḥ: Forest, garden, tree, parts of tree, flowers, fruits, leaf, shrub, creeper, names of trees, names of shrubs, names of creepers, names of grass, etc.

Simhādivargaḥ: Animals, lion, tiger, wolf, deer, kinds of deers, etc. Insects, bee, cricket, birds, hawk, skylark, crow, parrot, etc. parts of birds, wing, beak, etc.

Manuṣyavargaḥ: Man, woman, descriptions of woman, blood-relations like son, daughter, husband, wife etc., manhood, different stages of manhood, parts of our body, diseases such as cough, scab, etc., dress, ornaments, cloths, types of cloths, cosmetics, fragrant plants, sandal etc., hair decoration styles, daily usable things etc.

Brahmavargaḥ: Tribes, religious states, sacerdotal, scholars, characters and descriptions of priests, their occupations and observances, types of fires, sacrifice, its requisites, alms, worship, austerity, study, hypocrisy, marriage, human, pursuits and objects etc.

Kṣatriyavargaḥ: Military tribe, kings, ministers, officers, servants, enemies, allies, requisites of government, means of defence, and of success, revenue, foresight, insignia of royalty, army, elephants, parts and kind of elephants, horses, types of horses, vehicles, chariots, litters, warriors, arms and weapons, bow, arrow, javelin etc. war, slaughter, funeral, prison, life, etc.

Vaiśyavargaḥ: Third tribe, professions, husbandman, field, implements of husbandry, corn, pulse, oil-seeds, granary, kitchen, vessels, prepared food, dairy, cattle, traffic, weights and measures, commodities, etc.

Śūdravargaḥ: Fourth tribe, mixed classes, artisans, jugglers, dancers, musician, hunters, servants, barbarians, dogs, hogs, theft, nets, fops, loom, plot

for burden, wrought leather, tools, art, images, wages, spirituous gaming, etc.

Ṛṭiya(3rd) Kāṇḍa

The third kāṇḍa contains adjectives, verbs, words related to prayer and business etc⁴. It is divided into four Vargas or parts. They are, *Viśeṣyanighnavargaḥ* (adjective), *saṅkīrṇavargaḥ* (miscellaneous), *nānārthavargaḥ* (polysemous), *avyayavargaḥ* (indeclinables), *liṅgādisaṅgrahavargaḥ* (gender).

Varga contents

Viśeṣyanighnavargaḥ: Epithets of persons, Qualities of things, etc.

Saṅkīrṇavargaḥ: Miscellaneous

Nānārthavargaḥ: Homonymous and polysemous words

Avyayavargaḥ: Indeclinable

Liṅgādisaṅgrahavargaḥ: Genders, Masculine, Feminine, Neuter, Masculine and Feminine, Masculine and Neuter, Feminine and Neuter, Three genders, variations of gender.

COMMENTARIES ON AMARAKOŚA

Amarasiṃha's lexicon is the oldest work of the kind now extant. It is of great interest to note that, it has been universally accepted as an authority by the Brahmins and the Jains as well. The fact that it has been commented upon by Buddhists like *Subhūticandra*, by Jains like *Āśādharapaṇḍita* and *Nācirāja*, and by Brahmins like *Kṣīrasvāmin*, *Mallinātha* and *Appayyadīkṣita* testified to its usefulness to every class of Sanskrit students (Rajan 2016).

The commentaries on *Amarakośa* are available in almost all Indian languages. Translations of the *Amarakośa* into Chinese, Tibetan, Italian, French, Mongolia, Burmese etc. have been recently found. It is difficult to provide the exact number of commentaries on *Amarakośa*, as many of them is not available. In the world of Sanskrit literature, a separate section is dedicated to the study of *Amarakośa* such as commentaries in Sanskrit and other languages, translations in other languages, other *kośas* on the basis of *Amarakośa*, etc. M.M Patkar in his book "History of Sanskrit Lexicography" mentions nearly 60 commentaries (Patkar, 1981: 172-174) on *Amarakośa* and also he tells that "Dr. Aufrecht records not less than forty commentaries on it in his "Catalogus Catalogorum" (Patkar, 1981: 19). There are more than forty commentaries on the *Amarakośa*.

Several well-versed Sanskrit commentaries emerged on *Amarakośa*. Some of these commentaries are

commented from some special point of view. For example, *Vyākhyāsudhā* is commented on the grammatical point of view. *Ṭikāsarvasvam* gives more elaborated grammatical details than *Vyākhyāsudhā*. The commentaries of *Kṣīrasvāmin* and *Rāmāśramī* are supposed to be highly informative from the point of view of biological terms and for the present study.

AMARAKOŚA TRANSLATIONS IN FOREIGN LANGUAGES

Chinese translation of *Amarakośa* is written by Guṇaratain 6th Century A.D. The Italian translation of *Amarakośa* is published in 1798. French translation by ALA *Loiseleur-Deslongchamps* is published at Paris in 1839-1845. Tibetan translation of *Amarakośa* was done by Kirticandra and *Grags-pargyal-mthsan of Yar-luns* at *Yam-bu*, the ancient capital of Nepal (Vogel, 1979) and it is published in 1912 (Ramanathan, 1971). Burmese *Amarakośa* was written (calligraphed) in 1938 by Guṇālaṅkāra at the *Shwegu Hall*. Its photo-mechanical reprint is done by Lokesh Chandra, son of the most famous lexicographer Raghu Vira. He mentioned in the introduction of his book that his father has collected *Amarakośa* in different languages of Asia. From them, he reproduced the Tibetan rendering of *Amarakośa*, by Si-Tu the well-known grammarian of the 17th century (Chandra, 1984).

DISCUSSION

BOTANY

Botany as has been proven had its dimension in the Indian classical literature, starting from Vedic texts. But it had never been delineated in a lexicon like *Amarakośa*. Lots of words relating to plants and tree species were listed in patches and even some of them well explained through their uses. But as a sourcebook for botany, we find the content very fascinating. But one has to never forget that many other sources existed prior to this work and is clearly shown in other chapters.

There is no direct reference in *Amarakośa* either to ecological principles or the effect of the environment on plants and animals. However, various physiographic features and basic classification of the land are provided (Rajan, 2016).

Abiotic factors

Abiotic factors of the environment such as rivers, mountains and such other aspects are mentioned in *Vārivarga*, *Bhūvarga*, *Puravarga* and *Śailavarga*. The

following rivers find a mention – Gaṅgā, Yamunā, Narmadā, Karatoyā, Bahuda, Śatadru, Vipāśā, Śone, Śārāvātī, Vetravatī, Candrabhaga, Sarasvatī, Godāvarī, Bhīmarathī, Kṛṣveṇī, Gautamī and Kāverī.

Biotic factors

The Vārivarga mentions various types of water plants that grow in different regions. Various types of water lilies are mentioned- Saugandhikā – light red; Raktasandhyaka – red lily; Kumuda – white lily; Puṣkara, Rājīva – lotus; Pundarīka – white lotus. Besides, Algae are also mentioned with two names – Janilī and Śaivala. Different types of places are mentioned where various plants grow. The Bhūvarga gives an account of places where plants of different types grow. These are - Naḍvān, Naḍvala - Place where reeds grow; Kumudvā - Place where lotuses grow; Vetāsvān- Place where elephant grass grows; Śādvāla-Place abounding in grasses (probably grassland); paṅkila - Place full of silt - muddy country; Anūpa - Place with plenty of water probably where hydrophytes grow and Kaccha - Swampy or marshy land.

There is also a mention of fields where irrigated (*naḍimātrka*) and non-irrigated - rain-fed - (*devamātrka*) crops are grown.

Biodiversity

Amarakośa gives a vivid account of the flora and fauna that were available to *Amarakośa*. The description in *Amarakośa* is by no means a comprehensive one and cannot be taken as a true depiction of the total flora and fauna.

Plant Biodiversity

Amarakośa includes water plants in *Vārivarga* while wild plants are listed with their synonyms in *Vanaśadhivarga*. Plants of commerce find a place in *Vaiśya Varga*. *Manuśya Varga* includes herbs used in perfumery and cosmetics. *Vanaśadhivarga* totally includes about 300 plants with their synonyms.

Botanical Terms Described In *Amarakośa*

The *Vanaśadhivarga*, as well as *Vārivarga*, mention different plants and their parts. These are:*Nāla*– The stalk of the lotus flower; *Mṛṇāla, Bīsa*– The tubular petioles of lotus; *Karahāṭa, Śīphākanda*– Rhizome of lotus; *Kiñjalka, Kesara*– Androecium (male organ); *Samvartikā, Navadala*– Leaf buds – young leaves; *Bījakosa, Varāṭaka*– The fruit of the lotus; *Praphulla, Utpulla, Samphulla, Vyākośa, Vikaca, Sphuta, Phulla, Vikasita* - Open flower; *Sthāṇu, Śaṅku*– The trunk of a tree where branches are removed; *Kṣupa*– Dwarf tree;

Sthamba, Gulma– Shrubs; *Vallī, Latā*– Creepers; *Vṛkṣa, Mahīruha, Śākhī, Viṭapī, Pādapa, Taru, Anokaha, Kuṭa, Śāla, Palāśī, Dru, Drumā, Āgama*– Trees; *Prakāṇḍa, Skandha*– Shoot; *Śākhā, Latā*– Branches; *Skandhaśākhā, Śālā*– The main or principal branch of a tree; *Mūla, Budhna, Anghri*– Roots; *Śīphājaṭa*–Fasciculate roots; *Avaroha*– Prop roots (as in Banyan tree); *Śirogra, Śikhara*– Apex of the plant; *Sāra, Majjā*– Heartwood inclusive of pith; *Tvak, Valka, Valkala*– Bark, rind or periderm; *Patra, Palasa, Chadana, Dala, Parṇa, Chada*– Leaf; *Vallarā, Manjari*– A cluster, either of leaves or of flowers; *Pallava, Kīsalaya*– A sprout (the term could be used for leaf bud); *Vistara, Vitapa*– Small branches and branchlets; *Sasya*– Fruit or grain; *Vṛṇta, Prasavabandhana*– Pedicel, petiole, peduncle, rachis; *Śālātu*– Unripe fruit; *Vāna*– Dispersed (withered) fruit; *Gucchaka, Stabaka*– Inflorescence; *Kuṅmalo, Mukula*– Floral bud; *Sumanasa, Puṣpa, Prasūna, Kusuma, Suma*– Flower; *Makaranda, Puṣparasa*– Nectar; *Parāga, Sumanoraja*– Pollen grains; *Kṣāraka, Jālaka*– Ovary; *Kalikā, Koraka*– Ovary immediately after fertilization; *Āśvattha, Vaiṇava, Plākṣa, Naiyagrodha, Aiṅgudam, Bārḥata*– Hypanthodium (Inflorescence cum fruit of fig plants).

FOREST AND GARDEN TYPES

In the *Amarakośa*, classification of forests into small forests, *Aranya* etc. and large forests, *Mahāranya* etc. is given right in the beginning of *Vanaśadhivarga*.

The cultivated gardens mentioned are: *Grihārāma, Niṣkuṭa*– Kitchen garden; *Ārāma, Upavana*– Public park; *Kṛtrimavan*– A grove with a thick growth of plants resembling a small forest; *Vṛkṣavāṭikā*– A pleasure grove; *Kṛīḍodyāna*– Royal garden; *Pramadavana*– Royal garden attached to harem.

FLORA OF AMARAKOŚA

The different categories of plants that are revealed in the four Vargas viz., *Vārivarga*, *Vanaśadhivarga*, *Manuśyavarga* and *Vaiśyavarga*, are presented here: *Vārivarga* mentions various types of water plants, lotuses, lilies that grow in different regions are mentioned. They are *Saugandhikā* – light red; *Raktasandhyaka* – red lily; *Kumuda* – white lily; *Puṣkara, Rājīva* – lotus; *Pundarīka* – white lotus; *Indīvara, Kuvalaya* – *Nelumbo nucifera*; *Padma, Nalina, Pundarīka* – *Nymphaea nouchali*. Besides, Algae (a non-flowering and typically aquatic plant of a large group that includes the seaweeds and many single-celled forms) are also mentioned with two names – *Janilī and Śaivala*.

Different types of places are mentioned where various plants grow. The *Bhūvarga* gives an account of places where plants of different types grow. These are – *Naḍvān*, *Naḍvala* – Place where reeds grow; *Kumudvā* – Place where lotuses grow; *Vetasvān* – Place where elephant grass grows; *Śādvāla* – Place abounding in grasses (probably grassland); *Paṅkila* – Place full of silt, muddy country; *Anūpa* – Place with plenty of water probably where hydrophytes grow and *Kaccha* – Swampy or marshy land. There is also a mention of fields where irrigated (*naḍimātrka*) and non-irrigated - rain-fed – (*devamātrka*) crops are grown.

Vanaśadhivarga (wild plants): This Varga consists of a list of more than 220 plants. It is beyond the scope of this summary to list all of them. Dr. Heinrich von Stietencron provided an illustrative manual and descriptions of plants of *Vanaśadhivarga* [<http://www.payer.de/amarakosa/amara206.html>]. In general, the plants mentioned are all wild types except for a few like coconut, date palm, areca etc. In the beginning, trees are mentioned followed by shrubs, herbs, creepers and then lastly grasses. Few important and familiar trees are mentioned here: *Bodhidruma*, *Caladala*, *Pippala*, *Kuñjarāšana*, *Aśvattha* – Sacred fig; *Cirabilva*, *Naktamāla*, *Karaja*, *Karañjake* – Pongamia, *Āmra*, *cūta*, *Rasāla* – Mango; *Picchilā*, *Pūraṇī*, *Mocā*, *Cirāyu*, *Śālmali* – Silk cotton; *Sāla*, *Sarja*, *Aśvakarṇa*, *Samvara* – Sal; *Śrīparṇikā*, *Kumudikā*, *Kumbū*, *Kaiṭarya*, *Kaṭphala* – Teak; *Udumbara*, *Jantuphala*, *yajñāṅgo*, *Hemadugdhaka* – Wild fig; *Saptaparna*, *Viśālatvak*, *Śārada*, *Viṣamacchada* – Dita tree. Some of the shrubs and herbs are: *Sinduvāra*, *Indrasurasā*, *Nirguṇḍī*, *Indrāṇikā* – Chaste plant; *Sumanā*, *Mālatī*, *Jāti* – Jasmine; *Unmatta*, *Kitava*, *Dhūrta*, *Dhattūra* – Thorn apple; *Kanakāhvaya*, *Mātula*, *Madana* – Poppy; *Atmaguptā*, *Jaha*, *Vyaṇḍa*, *Kaṇḍūrā*, *Prāvṛṣāyani*, *Rṣyapuktā*, *Śukāsimbi*, *Kapikacchu*, *Markaṭī* – Cowage plant. Different types of grasses like *Sugandhitējana* – Vetiveria; *Kuśa* – sacrificial grass are mentioned. *Vēṇu* (Bamboo) also finds a place among the grasses. Coconut, Date palm, Arecanut etc. are also included along with the grasses and they are considered '*Tṛnadruma*' meaning tree-like grasses. In the class of *Manuṣyavarga*, plants that are generally used for incensing, perfumery and cosmetics are listed. They are: *Lavaṅga* (cloves), *Agaru* (aloe wood), *Karpūra* (camphor), *Srigandha* (sandal powder/paste), *Jatiphala* (nutmeg) etc. In the *Vaiśyavarga*, plants generally of commercial value are

included. The list of plants consists of different types of cereals, pluses, spices, condiments and oil yielding plants. Some of these are: Cereals – *Vrihi* (Paddy), *Yava* (Barley), *Kodo* (Millet); Pulses – *Tuvarikā* (Tur dal), *Kulmāṣa* (Cowpea), *Māṣa* (Black gram), and *Mudgara* (Green gram); the spices are: *Marīca* (Pepper), *Jiraka* (Cumins), *Tintriṇī* – (Tamarind), *Kustumbarī* (Coriander), *Sṛṅgavera* (Ginger), and *Haridra* (Turmeric); Oil yielding plants are: *Harenū* (Peanut), *Jaltila* (Niger seed), *Tila* (Sesame), and *Sarṣapa* (Mustard).

ETYMOLOGY AND PLANT CHARACTERS

Here below are few examples in the category of etymology and plant characters. For instance the tree *Alstoniascholaris* of the family Apocynaceae has the following names: *Saptaparnī*– Seven leaves (leaflets); *Viśālatvak*– Wide and thick bark; *Śārada*–Flowers during Śaradṛtu (approximately during October and November); *Viṣamacchada* – The leaflets are unequal in size. The dissection into leaflets is unequal.

Ficus glomerata

Country Fig–It belongs to the family Moraceae has the following names: *Udumbara* – has a bark or skin that peels off; *Jantuphala*– with flies inside the fruit; *yajñāṅgo*–The tree of branches form a part in the rituals in the sacrificial fire (*Yajña*); *Hemadugdhaka*– The tree on wounding yields golden coloured latex.

Ficus religiosa

Bodhidruma– A tree associated with *bodhisattva*, *Caladala*– leaves oscillate even in slight breeze; *Pippala*– found inland Pippala; *Kuñjarāšana*– elephant food; *Aśvat'tha* – Horses tied to the tree (like a stable).

Bauhinia galpini

Kovidāra– spreads in-ground; *Camarika*– copper coloured flower; *Yugapatraka*– twin leaflets.

Cassia fistula

Āragvadha– helps to remove enemies; *Rajavr̥kṣa*– the king among trees; *Samyaka* – like śami tree because of fruit type; *Caturaṅgula*– four-finger long fruits.

Classification of plants based on the sex organs

The classification of plants into flowering and non-flowering indicates the emphasis laid on reproductive organs in the classification of plants. It is this system i.e., classification based on reproductive organs, that is followed even now in modern botany.

Parasites and Epiphytes

According to Seal (1915), *vṛkṣādani* and *vṛkṣaruha* represent parasites and epiphytes, respectively. This

interpretation seems to be correct in view of the commentary of Kṣīrasvāmin (Oka, 1913). Commenting on *vrkṣādānī*, Kṣīrasvāmin observes-*vrkṣamapihamṭiti vrkṣādānī* meaning that which destroys the tree of origin. This surely must be a parasite. While *vrkṣaruha* according to Kṣīrasvāmin (*vrkṣērōhatiti vrkṣaruha*) is that which grows on the tree - meaning an epiphyte.

Ecological knowledge

The mention of different places like *Anupa*, *Pankila*, betrays a primitive knowledge of the importance given to the surroundings in the study of plants (Rajan, 2016).

CONCLUSIONS

The *Amarakośa* is by no means the oldest Sanskrit lexicon, though it is the oldest available one. As many commentators point out *Amarasiṃha* has borrowed information from the pre-existing lexicons. Unfortunately, all of them (old lexicons) seem to be extinct now. The list of plants mentioned in *Amarakośa* is not comprehensive, in the sense, it should not be taken as an indicator of the plants known to the people at that time. The lexicon includes only a selected few. From the modern botanical standpoint, the study of *Amarakośa* helps us to arrive at the following conclusions:

Classifying, identifying, comparing and contrasting the plants based on their reproductive characteristics have a long tradition in ancient Sanskrit literature and are being followed even now in modern botany. Etymological analysis of plant names indicates that they are based on different characters of a plant and perhaps were in use in different localities. The various plant parts have been given exact and short scientific names. One of the present difficulties in Indian education, in switching over to Indian languages is said to be the paucity of exact and precise scientific terms. A perusal of *Amarakośa* will clearly help us to collect proper scientific terminology with reference to plants. The precision with which the scientific terms are employed in *Amarakośa* to describe different parts of a plant becomes very evident. With regard to the nomenclature and taxonomic aspects, as is true of a lexicon, *Amarakośa* collects all the synonyms for a plant and mentions them as referring to a single plant.

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The collection of all these names would in a way serve as a brief taxonomic description of a plant. The different names on etymological scrutiny not surprisingly reveal a close degree of understanding of the plant characters and are indicative of the observational capacity of botanists of that time.

ACKNOWLEDGEMENTS

The author would like to thank Dr. Calyam L. Prabhakar, Director, Vedaadhyayana Kendra (NVAK), Bangalore, for going through the manuscript, suggestions and for encouragement. He also would like to thank Brahmasri Vedam Venkata Rama Sastri for his inspiration. Thanks are due to Mr. Anantasri Boddupalli for his help in various ways during the preparation of the manuscript.

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¹ lityamarasimhakṛtaunāmaliṃgānuśāsanēsvarādikāṇḍaḥsāṅgaēvasamarthitaḥ ||

² uktamsvarvyōmadikkāladhīśabdādisanātyakam | pātālabhōginarakamvāricaiṣāṃcasamgatam || 1-10-44 a.k.

³ | vargāḥpṛthvīpurakṣmābr̥dvanauśadhimṛgadibhiḥ | nṛbrahmakṣatraviṣṭūdraissaṅgōpāṅṅairihōditā || - 2-1-1 a.k.

⁴ | virōṣyanidhnaussan̄kīrṇairnānārtharavyayairapi | liṅgādisaṅgrahairvargāḥsāmānyēvargasamstrayāḥ || - 3-1-1 a.k.

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