

Ancient Science of India-9: Hanuman and Army Personnel in Ramayana were not Biological Monkeys: A Review of Human Ecological Significance

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ABSTRACT Sri Rama's army is described as *Vaanara Sena* (Monkey Troops) in Ramayana, but their activities as narrated indicate that they were not biological monkeys. They were forest dwelling tribal community from four distinct areas of India through which Sri Rama had travelled during his forest dwelling fourteen years. They were kings, scholars, doctors, engineers, best athletes in the army group and were proficient in 'Monkey war technique' of which the army of Raavana was not acquainted. Hanuman was regarded and recognised as a hero personality and in course of time accepted as a *Devataa* in Hindu religion due to the effect of *Tantra* philosophy.

INTRODUCTION

In India almost in every village, town and religious places, Hanuman is worshipped. In a compilation (*Kalyaana Hanuman Anka 1975*) Gita Press, Gorakhpur, India, has recorded 160 famous ancient Hanuman temples in our country. This shows the popularity of the worship since the ancient time (Padhy et al. 1999). As son of *Pavana Devataa*, He is named as *Maruti* (*Maruta* other name of air). He is the working energy of *Ssiva* and great devotee of Rama (the incarnation of *Vishnu*). He is a congregation of all divine powers, specially has taken this appearance and played a vital role for killing Raavana and rescue of mother Sita.

Bhagawaan Ssiva is given the status as *Ja-gatguru* (teacher of the universe) because of His qualities like sacrifice, calmness and stable at the highest state of *Yoga*. *Ssiva* is ever immersed in *Yoga - Samadhi* like the ancient Indian Yogis. *Ssiva* is the creator and master of grammar. Puranic literature describes that, the energy of *Ssiva*, carried away by Wind god was placed in the womb of *Anjana*, mother of Hanuman. Accordingly, Hanuman is the power of *Ssiva* and incarnation of his working force, a mythical presentation.

The aim of the present communication is to evaluate the human ecological significance of Hanuman and Sri Rama's army personnel.

METHODOLOGY

This study was carried out following the 'Literary Research' methodology in Ethno-biological research techniques (Padhy et al. 2015).

OBSERVATIONS AND DISCUSSION

Animal Worship in India

In Indian scenario, some of the animals like monkey, cow, bull, elephant, rat, birds, tortoise, snake and fish are worshipped directly and some deities like *Ganesh*, *Nrusingha*, *Varaaha* and *Hayagreeba* having animal heads with a human body. Almost all the deities (super humans) are also found associated with one or the other animal (a sub-human) as their mount (*Vaahana*). The *Vaahana* is specific for each deity, representing the God in animal form. The characteristics of the animal usually symbolize the nature and personality of the deity (*Vitasaxis 1977*).

Animal worship, even though, is symbolic; it plays a vital role in conservation of animals. In many instances particular animals associated with the deities are ordinarily not killed (rather conserved) by the sect of worshippers. The cow as the mother is famous in our country and commonly we are hospitable to an ox. Similarly, people are reluctant to kill a snake, a rat or a cat. It is observed that feeding the crow in the morning before on setting the hotel business is an outcome of the influence of mythology. Even in the day-to-day ritual of the Hindus like *Vaishvadeva Pujaa*, a special share of food is dedicated for dogs, crows and insects, which shows the highest philosophical thought for conservation of animals (Dash and Padhy 1998).

The *Tantra* philosophy is a reinterpretation of Veda for modern man, which is formulated in the present age, *Kaliyuga* (Bernard 1989). Ha-

numan worship is very popular in India. May be in the beginning of *Kaliyuga* more than 5000 years ago, Hanuman was recognised as a hero personality and in course of time due to effect of *Tantra*, established as a *Devataa*. The motto for worshipping a particular deity in Hindu mythology is to drag its power in order to fulfil the physical, psychological and philosophical needs of the concerned. In the Vedic age worshipping of the nature as manifestation of God, was of prime importance and in course of time different plants, animals and various deities were introduced to mythology. It seems that the ancient people had realised that gain of animal power too was essential to be successful in life.

Hanuman has a special format known as *Panchamukhee* Hanuman (Padhy et al. 1999). The *Panchamukhee* (five faced) form of Hanuman is a combination of five Godheads in animal form attached to the *Vaanara* (Monkey) *Shareera* (body). According to the Sanskrit script 'Shree Vidyarnaba Tantra (Hanumat Prakarana)' Hanuman is faced to the east (front) and the *Singha* (lion), *Garuda* (eagle) and *Varaaha* (wild pig) faces are directed to south, west and north respectively, the *Haya* (horse) face amidst the latter four directed upwards, with *Aayudhas* (weapons) like *Khadga*, *Trissula*, *Khatwaanga*, *Pasasa*, *Ankussa*, *Parvata*, *Stambha*, *Mushthi*, *Gada* and *Vrukshya* handled in ten arms.

The most ancient biological classification depicted in the legendary epic *Manusmriti* (Swain 1997b) has divided the animals into three groups (Das and Padhy 1997):

1. *Yaraayuja* (born from womb - animals)
2. *Andaja* (born from egg - Fishes, Reptiles and Aves)
3. *Swedaja* (born out of filthy hot moist atmosphere and eutrophication -Flies, Bugs, Mosquitoes and all other non-chordates).

Among the *Yaraayuja* the animals are further divided into three groups such as:

1. Herbivore : a) Domesticated
b) Free living
2. Carnivore
3. Human forms : a) *Raakshaasa*
b) *Pisaacha*

c) *Manushya* (man)

In the *Panchamukhee* Hanuman form all the prominent representative members of *Andaja* and *Yaraayuja* divisions are reflected such as

- 1) The Eagle (*Garuda - Aquilasp / Haliaeetus* sp ? - Representative of all *Andaja* - mount of Lord Vishnu - use snakes as prey in food chain - worshipped against poisonous effects)
- 2) The Horse (*Haya-Equuscaballus*- herbivore domesticated-represented as deity *Hayagreeba*, one form of Lord Vishnu - unit of power measurement as per science worshipped to overcome demonic forces).
- 3) The Wild Pig (*Varaaha - Hylochoerusmeinerizhagenie* - herbivore, powerful, free living - represented as deity *Varaahaavataara*, 3rd incarnation of Lord Vishnu - Herbs are the source of medicine - worshipped as remedy for all feverish diseases).
- 4) The Lion (*Singha - Pantheraleo* - Carnivore - represented as deity *NrushinghaAvataara*, 4th incarnation of Lord Vishnu - King of the forest at the top trophic level - worshipped to overcome fear psychosis).
- 5) The Monkey (*Vaanara - Macacasp / Presbytessp*, the anthropoids -*Vaanara*, alternative man, represented in lieu of man - Great devotee of *Bhagawaan* Sri Raamachandara, 7th incarnation of Lord Vishnu - vegetarian, most powerful worrier- worshipped to demolish all sorts of enemies).

It is clear from the above analysis that Hanuman represents the animal diversity, the later needs special care of the humanity for conservation.

The integration of four animal heads with, the *Vaanara* body certainly signified the empirical depiction of the animal classification as described above; but the human form as per classification is replaced by *Vaanara* (alternative man). In this context to have more insight into the fact, it is essential to analyse the concept of the Vedic people regarding the position of *Vaanaras* in the animal kingdom.

Vaanaras in Vedic Age Literature

In Vedic literature *Vaanara* were not equalised with the other free-living herbivore animals and considered nearer to man. In a different classification, all the animals are divided into two groups.

- 1) *Mukhaadaana*: taking hold by mouth.
- 2) *Hastaadaana*: taking hold by hand. (*Hasta* - Hand - power of capturing. In the sec-

ond group, *Vaanara* is equalised with human beings as user of hands for holding (Taittiriya Samhitaa vi, 4, 5, 7 Maitraayani Samhitaa iv, 5, 7).

There are references where *Vaanaras* are used as alternate to man such as *Maayu* (Ape) or *Kimhpurusha* (Vaajasaneeyi Samhitaa, Taittiriya Samhitaa iv. 2, 10; Satapatha Braahmana, vii. 5,2,22); *Puruska Mrga* (the man wild beast - Taittiriya Samhitaa-V. 5, 15; Maitraayani Samhitaa iii, 14, 16); *Purusha Hastin* (The man with a hand: Vaajasaneeyi Samhitaa xxiv. 29; Maitraayani Samhitaa, iii. 14,8) (Padhy 2022b).

One possible explanation is that, according to Manusmriti, *Manushya* (man) is physically and physiologically a vegetarian and Smriti has devoted much to make man conscious of his food habit. However, it is also identified that there is inherent tendency of man to eat flesh and go for carnal sex (V/56. Manusmriti), which is responsible for diversification of human forms as *Raakshyasha*, *Pishaacha* and *Manushya* (A cultural classification). In order to avoid such confusion, during the formulation of *Panchamukhee* Hanumnn deity, the human form is represented by *Vaanara* (Vaa + Nara = Alternative man) which is a pure vegetarian and considered to be ancestors of man from Vedic age to modern Anthropology. This again reinforces the idea of creating vegetarian food consciousness in man through mythology. However, the possibility of a factful presentation of the deity, to explain the trend of evolution reaching to the climax through the *Vaanaras*, cannot be ruled out.

The Vedas were thought to be compiled in *Kretaa Yuga*, which was followed by *Tretaa Yuga* famous for Ramaayana. In this epic *Vaanaras* are represented as selfless, humble and devoted, being most powerful associated with *Bhagawaan* Sri Ramachandra to rescue mother Sita. There are more evidences in Ramaayana to consider *Vaanaras* as human beings than animals discussed later.

Tulasidas has presented in Hanuman *Chalisa Rama Duwara Tum Rakhawara* (21/40).

(You are the sentinel at the door of Rama's mercy mansion or His divine abode). From Yoga point of view, Rama is the life spirit in any human body (living body) and the flow of the breath is the spirit of Hanuman (*Maruti*). *Rama Duwara* is the gateway into Yoga practice

and Hanuman is the process of 'Pranayama' (Padhy 2009). Through Pranayama, only one can raise the *Kundalini* power (Padhy 2016) (rescue of mother Sita). Hanuman is ever regarded as a great Yogi.

In *Dwaapara Yuga* Hanuman is given highest regard in Mahaabharata being at the top of *Bhagawaan* Sri Krishna's Kapidhwaja Ratha (Chariot). Moreover, he is described as the brother of Bheemasena by virtue of the parental origin of *Vaayu Devataa*.

Evolution of Man - a Look Back

In the process of evolution, man emerged more recently than 30 million years ago and earlier than 40,000 years back. At least as early as the Geological epoch Miocene, more than 15 million years ago, the ancestors of the apes and of man began evolving along separate lines. Both apparently evolved from upright terrestrial primates (close relatives of Proconsul), who were the common ancestor of man and apes from Miocene times. Based on fossil evidences these pithecanthropus man were living in Java, China, Africa and Europe. They stood upright, five feet height and more with midway size brain were ancestors of the human stock who walked erect with forehead low, pronounced brow ridges and jaw protruded. They hunted in groups and perhaps used fire.

Later the Neanderthal man appeared in Eurasia and Northern Africa with a body structure like Pithecanthropus. However, they had a large brain, made excellent flint tools and buried their dead.

The successors to Neanderthal man were people known as Cro-Magnon. Their way of life was the peak of Stone Age culture. They were vigorous, intelligent people and manufactured finely carved tools and ornaments from ivory, finely chipped stone arrow and spear points. Evidences of the lifestyle of those men are now also available in mountain caves. Moreover, the apes have been shown to have blood types (Rh factor) comparable, although not identical, to the human ABO blood group system. Great apes like Chimpanzees and Gorillas have the same blood group types- A, B, AB and O. In fact, Rh factor is a historical record for the scientific evolution of man.

The Human Quality of the *Vaanaras* of Sri Rama's Army

In Manusmriti (Swain 1997b), the human forms (beings) are divided into three groups (Chapter 1, Sl. 43): *Raakshaasa*, *Pissaacha* and *Manushya* as discussed earlier. From modern scientific view, no forms like the earlier two are existing now, but they are categorised such because of their food habit, social and cultural activities. As per Puranic descriptions the *Raakshaasa*, were worriers, powerful with austerities and called as *Asuras*. In general, they were never free from carnivorous food habit and drinking alcohol. But exemplary persons like *Bibhishana* and *Prahallaada* from *Raakshaasa* family were pious persons. Sri Krishna was nephew of *Asura* Kansa and Bheemasena married to a *Raakshaasa* woman Hidambikee.

The next group *Pissaacha* is of lower quality human beings with food habit of low graded creatures like frog, snake, different insects and other food declared as forbidden food in Manusmriti. Drinking wine, sheltering under trees, living in unhealthy atmosphere without any cultural base and involved in black magic are the intrinsic value of *Pissaachas* (the filthy eaters).

Human beings (*Manushya / Maanava*) are expected to be vegetarian from physical, physiological and cultural point of view. This shows that Manu has not given the status of man (*Manushya*) to all the human forms. Similarly, Valmiki the author of Ramayana might have presented the Rama's army as a group of monkey (*Vaanara*) due to some anthropological reason; needs analysis.

There are many evidences in Ramayana to focus that the *Vaanaras* of Sri Rama's army were not biological monkeys. At first, the characters of Hanuman need detailed examination.

Hanuman is known as a *Brahmachari* since the ages. But it is never possible in case of an animal to practice celibacy. Sex is their innate character.

It is described in Raamayana that Hanuman was a Sanskrit scholar. When he first met Rama and Laxmana near the Rishyamuka Hills, He was dressed like a begger Braahmin and conversed in Sanskrit with the two brothers to know their identity.

He was a scholarly personality enriched with strength, energy and concentration; well versed with Vedic knowledge and grammar with good characters and qualities.

With full courage, he alone first crossed the sea to enter into Lanka. In the mid-way, he came across a Hill named Mainaka, which was looking radiant. This abnormal character of Mainak Hill is described in Box-1. Looking to the glory and light emission of the rocks Hanuman tactfully avoided the hillock and that indicates his cleverness.

BOX-1

Mainaka Hill of Ramayana (Padhy 2009)

The Mainaka Hill was situated in between India and Sri Lanka. Hanuman saw this hillock while crossing the sea for the first time in search of mother Sita. In Ramayana, Valmiki has described the beauty of the hill through 9 verses. He has narrated that the Mainaka Hill was looking Golden, enriched with the brightness of golden lustre, Glittering, Bright like the Sun light, very powerful and looking brilliance due to some reason. Using so much of adjective to describe the beauty of a hillock in nine verses by the great poet has some inner meaning that needs analysis.

The glittering nature of Mainaka was due to presence of radioactive metallic chemical element Thorium. Thorium is a silvery and tarnishes black material; when it is exposed to air, forming Thorium Oxide. This element was discovered in 1828. Its atomic number is 90 and atomic mass 232.038. Thorium Nitrate can irritate the skin causing a rash or burn feeling on contact. Thorium dust increases the risk of lung and pancreatic cancer. In nature it is available as Monazite Salt being associated with Cerium and other rare-earth elements. India has the largest store house of Thorium. Due to heavy nucleus it automatically disintegrates releasing α , β , γ rays.

Both Thorium and Cerium when they come in contact with the air and temperature they glitter like burning fire. That had added beauty to Mainaka and caused confusion with Hanuman. It cannot be claimed that Valmiki was aware of radioactive elements, but the way he has narrated the hillock beauty in 9 verses is a matter of importance. In course of time due to disintegration the Mainaka hill is completely turned to Rare Earths and and Government of India takes care of these elements through 'Indian Rare Earth Limited'. Moreover, the Mountains, Lakes, Rivers and forests described in 'Ramayana (Amirthalingam 2013) are available now; but not Mainaka.

Entering Lanka, Hanuman in disguise moved around in searching of Sita. He found that there was recitation of Veda at many places and people were busy with performing *Yajnya*. Finally, he located Sita in Ashoka *Vana* (forest) being surrounded by female guards around. He concealed self at the top of a tree and watched the situation- a unique consciousness of a person.

Coincidentally, Raavana came to that place at that time and in perfect Sanskrit mobilised Sita to agree for his attitude. After departure of Raavana, Hanuman got the chance to meet Sita. A peculiar thought developed in his mind that if he talks with Sita in perfect Sanskrit, she may not believe him and misunderstand as a person of Lanka sent by Raavana, or he himself in disguise form. Hanuman approached Sita and conversed with her in incorrect Sanskrit to gain her faith. He recited the glory of Rama to strengthen her confidence. The intelligence of Hanuman can be marked from this event.

With pleasant behaviour, he consoled Sita, presented her the gift ring of Rama and collected her forehead ornament as an evidence of Lanka visit.

Hanuman was a perfect diplomat. He was previously close to Sugriba and became close to Rama and Laxmana with his pleasant behaviour. He is responsible for the unique friendship between Sri Rama and Sugriba. In order to strengthen their friendship, he generated fire by rubbing two wooden sticks. In presence of Hanuman both of them promised to be intimate friends throughout life before the burning fire.

In another event, when Bibheshana came to Rama and requested for seeking refuse, there was objection from significant persons of Rama's army. But Hanuman took this as a positive symbol to create division in the enemy camp and convinced all to accept Bibheshana. All throughout Hanuman was trustable personality and liked by all in Rama's army.

The most remarkable event during Hanuman's first visit to Lanka was the burning of the whole city. In order to prove the strength of Rama and irritate Raavana, first he spoiled the Phyto-diversity of Ashok Vana. When Raavan's army came to catch him there was fighting and he killed many captains and soldiers including a brave son of Raavan named Akhaya Kumara, single-handed. Finally, with application of a tactful

technique he burned the whole Lanka and returned. A single messenger of Rama could do so much destruction of Lanka that surprised each one, the Lanka inhabitants including Raavan.

The members of Sri Rama's army were not biological monkeys that is clearly reflected in Ramayana, *Yudha Kanda, Sarga* (chapter) 37, verse 33-35. Prior to the commencement of the battle, Sri Rama had given the instructions to all the *Vaanara Sena* to be in the monkey form (as army uniform) and none should be in human form. This will be the symbol of the army as named. Only seven were expected to be in human dress. They were - He himself, Laxmana, Bibheshana and his four followers. This was essential to distinguish the army of one group from the opposite group. Most probably, the specific dressed *Vaanaras* were described as monkey throughout Ramayana to avoid any confusion. Most probably, the army was named as *Vaanara Sena* as Srikrishna's chariot was Kapidhwaja (Monkey symbol flag) Rath in Mahabharat war.

In India, *Dhoti* is a national dress since the Vedic period. In south India, the *Dhoti* is worn in double fold in the form of Lungi. In most of the parts of our country, *Dhoti* wearing style is with tucking one end of the long cloth at back. Since Sri Rama and Laxmana used to wear *Dhoti* in the later style, the army people might have followed that style. If one wears *Dhoti* binding tightly (as the working class), he feels spirited to work or fight. Valmiki (the author of Ramayana) was from Tamil Nadu (Govindan 2004). May be the tucked cloth style was narrated by him as the tail of a person (monkey).

Sugriba and his late elder brother Bali, Kesari (biological father of Hanuman) were kings; joined in Rama's army along with their warriors. Like Hanuman, - Angada (son of Bali) was a learned person and was sent as messenger to Raavana. Angada also openly displayed his heroism in Raavana's council and conversed with them in perfect Sanskrit; also insulted him.

The jumping technique of *Vaanaras* was very special and compared with the flying activity like birds with speed, strength and quickness. The whole army was following 'Monkey War Technique' such as - sudden attack on soft areas of the fighting enemy; jumping on him and attacking the head; throwing stones and logs

with perfect aim; pulling the leg of the opponent suddenly and make him unstable; use of nail and teeth to injure; showing grimace furious face to make him timid etc. comparable with Gorilla and Kung Fu war of the present time.

The name of some significant warriors in the army are as follows (Patnaik 1991) Angada, Durmukha, Dwibeenda, Gabaya, Gabakshya, Hanuman, Jambhabana, Kessari, Kumuda, Mainda, Nala, Neela, Panasa, Rushava, Sarabha, Sugriba, Sussena and Taara. These Sanskrit names cannot be linked with the biological monkeys.

As a generalized notion standing until today, the Rama Setu was constructed only with stones. However, as described in Valmiki Raamayana the Setu was constructed with the help of different wooden logs (Vide SI-54-60/XII/*Yuddha Kanda*) used for the purpose (Padhy and Dash 2008). The Setu was completed in 5 days, 48 Km. connecting Rameswaram of India with Mannar island of Sri Lanka. The whole work was done on a basement mountainous foundation (existing now) and on necessity, stones were laid, procuring and bringing them with the help of me-

chanical device 'Yantra'. Nala, a member of Sri Rama's army was the construction engineer and chief architect was bestowed with engineering skills. There was systematic division of labour among the army personnel involved in the construction work; some were busy in shaping the straightness of the Setu with strings; some were involved in measuring the depth of water with measuring sticks; a group was involved in procuring the materials and another group was setting the existing rocks coordinating with the wooden logs and other plant materials. Initially, the Setu was constructed as intermittent patches and finally these were conjoined together (vide SI. 61-73/XII, *Yuddha Kanda*). Is it possible with Monkeys?

The plants used for Rama Setu construction are reflected in Table 1.

As a matter of coincidence, most of the species used for the Setu are either latex/resin bearing, and/or water resistant or insect resistant in nature; focuses over the botanical knowledge of the plant procurers during Setu construction.

Table 1: List of plants used in construction of Rama Setu (Padhy and Dash 2008)

S. No.	Sanskrit Name (Reflected in Ramayana)	Hindi Name (Geeta Press)	Botanical Name and (Family)
1.	'Saaleih'	'Saal'	<i>Shorea robusta</i> Gaertn. F. (Dipterocarpaceae)
2.	'Asswakarnouh'	'Asswakama'	<i>Vaticarobusta</i> * = <i>V. chinensis</i> Linn.? (Dipterocarpaceae)
3.	'Dhaveih'	'Dhav'	<i>Anogeissus latifolia</i> (DC) Wall. et Bedd. (Combretaceae Or <i>Woodfordia fruticosa</i> Kurz. = <i>Grisleatomentosa</i> Roxb.* (Lythraceae)
4.	'Baanssuh'	'Baanssa'	<i>Bambusa arundinacea</i> (Retz.) Roxb. (Poaceae)
5.	'Kootajeih'	'Kootaja'	<i>Holarrhena antidysenterica</i> (Linn.) Wall. ex DC. = <i>Wrightia antidysenterica</i> Linn. (Apocynaceae)
6.	'Arjuneih'	'Arjuna'	<i>Terminalia arjuna</i> Wt. and Am. (Combretaceae)
7.	'Taaleih'	'Taal'	<i>Borassus flabellifer</i> Linn. (Arecaceae)
8.	'Tilakeih'	'Tilak'	<i>Symplocos racemosa</i> Roxb. (Symplocaceae)
9.	'Tinissaih'	'Tiniss'	<i>Dalbergia latifolia</i> Roxb. = <i>D. ujjeinettsis</i> * (Fabaceae)
10.	'Bilwakeih'	'Bilwa'	<i>Aegle marmelos</i> (Linn.) Corr. (Rutaceae)
11.	'Saptaparni'	'Chetvan'	<i>Alstonia scholaris</i> (Linn.) R. Br. (Apocynaceae)
12.	'Karnikarei'	'Khilehue'/'Kaner'	<i>Butea monosperma</i> (Lank.) Taub. (Fabaceae)
13.	'Choota'	'Aam'	<i>Mangifera indica</i> Linn. (Anacardiaceae)
14.	'Assoka'	'Assoka'	<i>Saraca asoca</i> (Roxb.) de Wilde. (Caesalpiniaceae)
15.	'Taalaan'	'Taado'	<i>Phoenix sylvestris</i> (Linn.) Roxb. Or <i>Caryotaurens</i> Linn. (Arecaceae)
16.	'Dadima'	'Anaar'	<i>Punicagranatum</i> Linn. (Punicaceae)
17.	'Naarikela'	'Naarial'	<i>Cocos nucifera</i> Linn. (Arecaceae)
18.	'Bibheetaka'	'Bahed'	<i>Terminalia belleirica</i> (Gaertn.) Roxb. (Combretaceae)
19.	'Kareer'	'Kareer'	<i>Capparis saphylla</i> Rath.* (Capparidaceae)
20.	'Bakul'	'Bakul'	<i>Mimusops elengi</i> Linn. (Sapotaceae)
21.	'Nimba'	'Neem'	<i>Azadirachta indica</i> A. Juss. (Meliaceae)

* (Williams 1899)

Jambhabana was comparatively a silent and elite personality who was regarded as the minister of Sri Ramachandra. While first entering into Lanka, Jambhabana identified a hillock named 'Mahodaya Parbata' filled with all necessary medicinal herbs - now conserved by Sri Lanka Government. He immediately made conscious to the whole army regarding the availability of necessary medicaments nearby. The Eco-consciousness of Jambhabana and convey of the message to every one of the army to make them Eco-alert; is a matter to be noted (Padhy 2011).

In Raamaayana, Laxmana *Shakti Veda* (missile attack) was a significant event. Raavana attacked Laxmana with a specific missile that collapsed the later. As checked by Kabiraja Susseena (a Doctor member of Rama's army), Laxman had his heart beating and respiration. He requested Hanuman to fetch four herbal medicines for recovery of Laxmana from MahodayaParbata earlier identified by Jambhabana. They were 'Beesalayakarani', 'Sandhanee', 'Saabarnakaani' and 'Sanjeebani' expected to cure four injuries due to missile attack, such as; 1) Injury due to arrow head and wound formation. 2) Possibility of bone fracture 3) Burning due to friction and 4) Faint of the patient respectively. Hanuman immediately brought the herbs from Mahodaya Parbata and on systematic application, Laxmana recovered. A general notion that Hanuman brought the medicines from Himalayas; not a matter of discussion at present (Padhy 2011).

In anticipation of further future need, Hanuman brought a huge amount of herbs (mythically represented that Hanuman brought the top portion of the mountain) and this activity was not appreciated by Sussena. He advised Hanuman to replace the excess medicinal herbs on Mahodaya Parbata and the request was carried out. The whole event emphasises on sustainable use and procurement of materials from the nature, a positive step for conservation of biodiversity. This consciousness is only possible with eco-alerted human beings.

There was no cooking arrangement in Rama's army. All were procuring food material from the evergreen forest of the equatorial region. Depending on food, material collected directly from forest is a generic character of tribal people.

The *Vaanara* nomenclature is an adjoining of two words, *Vana* + *Nara* (Forest + Human being).

Significantly points towards the forest dweller human society - the tribal. To learn more about the tribal quality of Rama's army persons it is essential to learn in details of the forest root of Sri Rama that he travelled in 14 years; discussed below.

Forest Regions of Ramayana

In the epic Ramayana, we come across five forest regions where Rama travelled during his fourteen years of *Vanabasa*. They are Chitrakuta, Dandaka-Aranya, Panchavati, Kiskindya and AshokaVana. Out of these the earlier, four are now present in India with change of name and the fifth one is at Sri Lanka. A short description of each forest is as follows.

The Chitrakuta forest is also known as Mahavana (Great Forest) a Tropical Deciduous forest. It starts from Northern Vindhya Range of mountains spread over states of Uttar Pradesh and Madhya Pradesh. Rama first halted at Chitrakuta Mountain where Bharat came to meet him and convince to return. After a short stay, Rama migrated to deep forest towards south.

Rama's next halt was at Dandaka-Aranya (Tropical Deciduous forest) situated in parts of present day Madhya Pradesh, Odisha, Telangana and Andhra Pradesh. The name Dandakais interpreted in two ways. The word *Danda* means punishment. Since Rama was punished *Vanabasa* and mostly spent his time in Dandaka forest, such a name was prescribed to the area. Secondly, there was a furious tribal person/Group called 'Dandaka' was living in that area and the nomenclature is accordingly done. Rama and Laxmana controlled them as they were causing lot of disturbance to the saints and common people. Moreover, the group of Rama spent ten years at Dandaka-Aranya in different *Aashrams* being invited by prominent saints (Pattnaik 1991).

Finally, by the advice of saint Agasti he migrated to a nearby tropical Dry deciduous forest named Panchavati enriched with natural beauty, Biodiversity and availability of food. The Panchavati forest was an attached part of Dandaka-Aranya where Laxmana constructed an *Aashram* for their inhabitation. Many negative events of Rama's life happened there. Significantly mother Sita was abducted. Their staying period at

Pachavati was two and half years. Panchavati is situated on the left banks of sacred river Godavari near Nashik city of Maharashtra province.

In search of Sita, both the brothers reached at Kishkinda where the famous Pampa *Sarovar* (Lake) exists. It is a dry and moist deciduous forest area where Rama were exposed to Sugriba and Hanuman. At present, the Pampa Sarovar is situated in the Bellary district of modern Karnataka, west of the Rishyamukha hill and east of the Matanga hill. All activities to search Sita started there and finally Hanuman detected her at Sri Lanka staying at AshokaVana (forest of *Saracaasoca*) amidst the ever-green forest being safe guarded by female watchers of Raavan. At Kishkinda, the army of Rama was assembled and all migrated towards Sri Lanka.

Sita was forced to stay at Lanka for eleven months and fourteen days and during that period - the Ramasetu was constructed. Finally, the war between Rama and Raavan occurred with the end of later's death. By that time, Rama's *Vanabasa* period was also over and he returned to Ayodhya.

In the epic 'Vrksaayurveda' (VR) written by Saint Paraasara (3rd - 4thAD), a treatise dedicated to present the plant science of Ancient India (Sircar and Sircar 1996), eleven forest regions of our country are focused. They are:

- | | |
|--------------------|----------------------|
| 1. CaitrarathaVana | 2. KaalakaVana |
| 3. KiraataVana | 4. PaancanadaVana |
| 5. PraacyaVana | 6. VedikaarusakaVana |
| 7. AangireyaVana | 8. KaalingakaVana |
| 9. DaasaraankaVana | 10. AparaaantaVana |
| 11. SauraastraVana | |

In this list the name of the forests of Raamayana were not reflected. The Dandak-Aranya area was divided into two:

1. VedikaarusakaVana that spreads in Tripura (Modern Tewar) in Jabalpur district of Madhya Pradesh and Kosala (Part of Uter Pradesh to Western Odisha) (VR, Chapter-III, Verse-14)
2. KaalingakaVana spreads in starting from Vindhyan and Chitrakuta hills, extends further southwards, through the land of Kalinga (South Odisha) and Draavida (Part of Andhra Pradesh and Telengana), up to the sea coast (Bay of Bengal) (VR, Ch-III, Ve-16).

The Panchavati was named as AparaaantaVana located in the Sahaadri hill region spreading up to Bhругu-Kaccha (the Kutch of Gujarat) (VR, Ch-III, Ve-18).

The Kishkinda forest region in the vicinity of the hills Srisaila, Vadasaila and Malaya Parvata was named as DaasaraankaVana where sandal wood trees grow (VR, Ch-III, Ve-17).

The point of presenting the Ramayana forests and Vrksaayurveda forest comparatively is to focus over the KaalingakaVana, which is exclusively major part of the Dandaka-Aranya where Rama lived for ten years. Since the Kaalingaka, forest starts from the Chitrakuta hills (as per Parasara); the Chitrakuta forest of Ramayana was not a separate forest. It was a unit of Dandaka-Aranya. Both are Tropical Deciduous in nature and Rama directly entered from the farmer to later. The name of the Kaalingaka forest was related with the old name of present Odisha state that was Kalinga. The involvement of Kalinga tribal people in Rama's army with their specialised war technique is discussed below.

Tribes of Odisha Expected in Rama's Army

The earlier discussions indicate that the members of Rama's army were different tribal community collected from different parts of Chitrakuta forest, Dandaka-Aranya, Panchavati and Kishkinda forest. Moreover, Sri Rama's journey (Fig. 1) from Ayodhya through the above forests; humble and sovereign relationship with public (sages, saints, tribal people) has added confidence for the aggregation of the whole army to fight against Raavan. Sri Rama's guest ship in the cottage of an old tribal woman (Sabari) and accepting her pre-tested offal fruits as *Prasad*, is a unique presentation in Ramayana; proves his love for the forest living community.

In Odisha, one-fourth population is tribal people (*Aadibasi*). There are 62 types of tribes (Mohanti and Behura 2008) in this province. Two tribes have the specific name 'Mankidi' and 'Mankiredia'. This name is related with animal names Mankada/ Markata (Monkey). In the present society, also surnames like 'Singha' (Lion), 'Naaga' (cobra), 'Bhallu' (Bear), 'Baagha' (Tiger), 'Saandha' (Ox) and 'Haatee' (Elephant) are prevalent. Even there is a Gotra 'Naagaswara' of certain present casts. The great researcher on tribal life and language in Odisha was Sri Gopinath Mohanty, IAS (1914-1991- Winner of National Sahitya Akademi Award in 1955, Jnapitha award in 1973, Padma Bhusan in 1981). In rela-

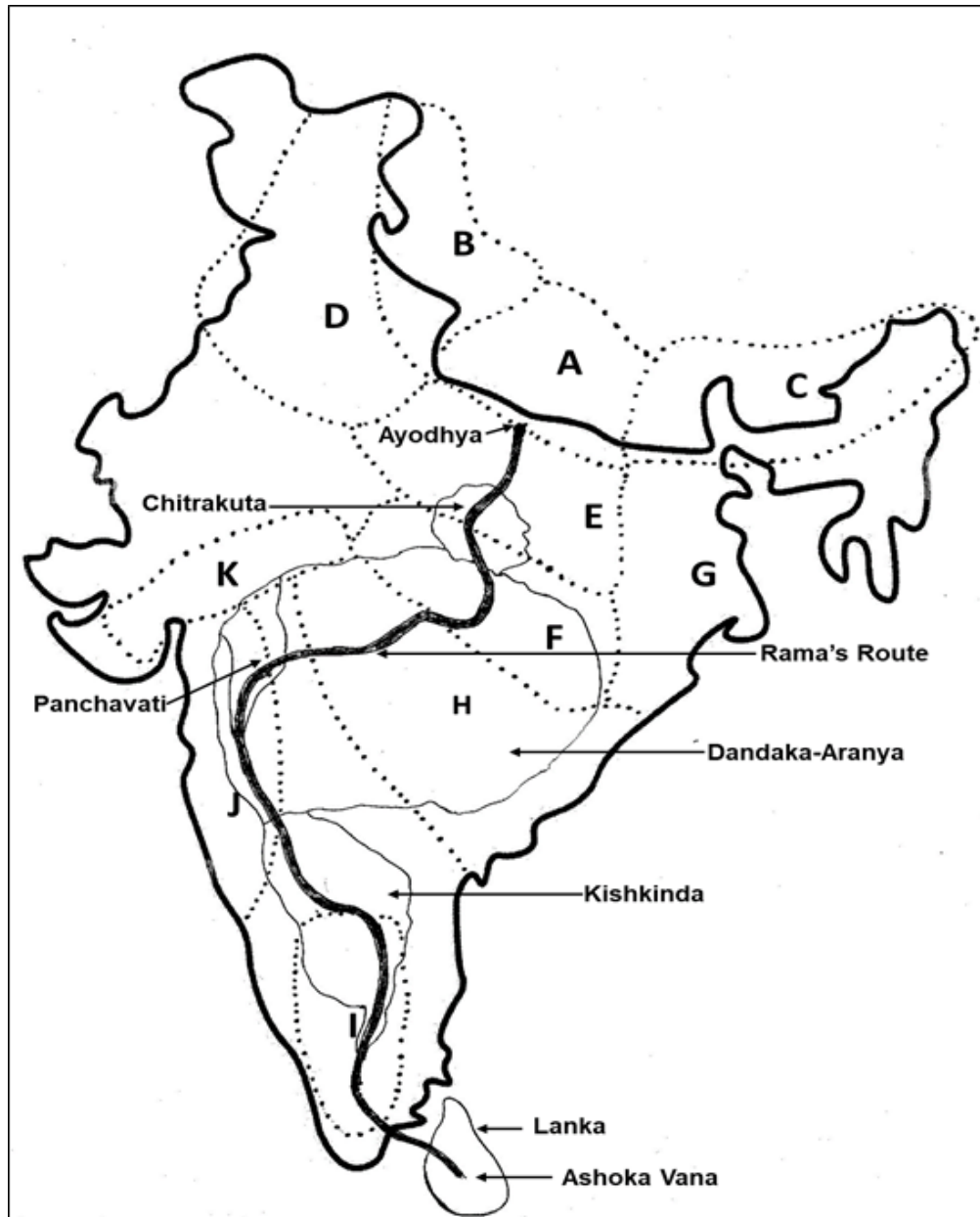


Fig.1*. Journey route of Sri Ramachandra from Ayodhya to Lanka through the forests of Chitrakuta, Dandaka-Aranya, Panchavati, Kishkinda upto Ashoka Vana. The forest divisions of Bharatavarsa (India) by Saint Parasara in his book 'Vrksaayurveda' (300 B.C.) is presented in dotted lines: (A) Caitraratha Vana, (B) Kaalaka Vana, (C) Kiraata Vana, (D) Paancanada Vana (E) Praacya Vana (F) Vedikaarusaka Vana, (G) Aangireya Vana (H) Kaalingaka Vana (I) Daasaraanka Vana, (J) Aparaaanta Vana, (K) Sauraastra Vana
 *Figure 1 is designed on the present map of Independent India (Amirthalingam 2013; Sircar and Sarkar 1996)

tion to his research on Ramayana he has presented the Gotra name of two tribes of south Odisha named 'Jambaakaa' and 'Praasaka' which means 'Bhallu' (bear) and 'Mankada' (monkey) respectively. He has confessed that, he himself is from 'Kandha' tribe with 'Praasaka' *Gotra* (Mohanty 2022). Tribe is a social division while *Gotra* has genetic relevance (Padhy 2022a). There is another tribe in Odisha called 'Banjara' / 'Banjaree', a nomadic community present throughout India. Their origin is believed to be rooted in Rajasthan. The relation of the name 'Banjara' with Hindi 'Bandar' (Monkey) cannot be overruled.

The present existence of specific tribes and *Gotras* in the present Odisha indicate that the forest people of this area (Dandaka-Aranya / Kaalingaka Vana) were active participants in Sri Rama's army. The army of Raavana were not acquainted with the fighting techniques of Rama's army, which led to their great failure. Additional information regarding the unique war ability of Kalinga Sena warriors during the Mahabharat war and later is presented in Box-2.

More to add here that the world famous Sri Jagannath Temple and its worship culture has a greater link with the tribal traditions of Odisha. The tribal descendants of the first tribal worshiper of the Lord named Viswabasu, are known as 'Daitapati' and they are presently regarded as bodyguard of the deities in the Jagannath Temple.

CONCLUSION

In modern science, Anthropology traces the origin of human being *Homo sapien* to the ancestors of the *Vaanaras* such as Java ape-man, Neanderthal man and Cro-Magnon man etc. The resemblance of man with Gorilla, Chimpanzee and Orang-utan like tail less monkey of anthropoid category supports more to the Vedic or Puraanic views on *Vaanaras* as an evolutionary group nearer to man than considering as mere monkey.

In human skull, the zygomatic bone also called as Cheekbone / Malar bone is commonly called as *HanuHada* (Hanu bone). Probably the Hanuman (he who possesses - Hanu bone) name is derived from the word Hanu, which gets nearer the Human beings and primates. DNA analysis conforms that human beings are primates

BOX-2

The Fighting Skill of Kalinga - Troop

The Mahabharat war was held on 22nd November 3067 B.C., Friday by 6: 30 A.M. (Padhy 2019). By that time the present Odisha state was in four Kingdom divisions called Uddra, Utkala, Kalinga and Kosala. The name Uddra is so ancient that it is reflected in epic Manusmriti (Swain 1997a) and Utkala name is as per the Grand Grand son of saint Manu, who was the ruler of the present Odisha (Padhy 2015). The Odisha name is derived from Uddra (a tribe) and the western part of the present state was historically known as Kosala. The entire Southern part was called Kalinga and accordingly the Kaalingaka Vana was named, discussed previously. There was good alliance among these states, Kalinga being the big one. These four states joined the Mahabharat war as Kalinga Troop (*Sena*) on Kaurava side due to different political reasons.

The unique strategy of Kalinga troop was altogether special and different in the Mahabharat war (Swain 1997a). The allied kings were not able to understand the real skill of war technique of Kalingas. They were not kept under the direction of any other troop or king for fighting and were enjoying full independence in the war. Moreover, they were allowed to fight on the first day of the war. The Kalinga king Srutaayu inaugurated the great war that continued for 18 days. On the first day the Kalinga troop proved their speciality by defeating Bhima and killing Iraavaan of Pandava side.

In course of time Kalinga Kingdom became a centre of trade routes of South Asia. King Ashoka (304-232 BCE) wanted to capture Kalinga in 262 BCE which resulted massive loss of life and property. Ashoka conquered Kalinga inspite of the special war-efficiency of Kalinga troop. But however, by observing the destruction of the war his mind changed and he accepted the Buddhism. The Dhauligiri is a hill located on the banks of river Daya 8 Kms south of Bhubaneswar in Odisha and the international peace Pagoda (*Shanti Stupa*) on that, reminds the Kalinga war and mind change of king Ashoka at the war field.

During the British period, much prior to 'Sepahi mutiny' (1857), the rebellious people of Odisha revolted against the administration of East India Company from 1804 to 1825. This revolt is known as 'Paika Bidroha'; claimed as the first Independence War of India cannot be ignored.

At present also the glimpses of the war technique of Odisha are presented in social functions as public show.

and that modern humans and chimpanzees diverged from a common ancestor between 6 to 8 million years ago (internet source). Moreover,

Google data focus that, Hanuman was a man with the face of a monkey and a long tail; the most modern view.

The observations of different aspects of Ramayana along with the modern Anthropological views and activities of the army people clearly indicate that, they were not biological monkeys, rather human being mostly tribal from different places of Bharatavarsa (India).

RECOMMENDATIONS

In course of the time, many aspects of Puranic literature are presented being enriched with mythological aspects. The search for truth is essential with social and scientific analysis.

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