

NEW LIGHT ON BHRAMARAMARI: A CONTROVERSIAL MEDICINAL PLANT OF INDIA

©Bikash Rath¹
Programme Associate
VASUNDHARA²
Bhubaneswar-751005
Orissa(India)

ABSTRACT

Bhramaramari implies to a plant species that kills *Bhramara*, a kind of bee . Hailed for its anti-leprosy potentiality, this plant (particularly, its timber) was also claimed to be useful in a number of other diseases.

The King of Keonjhar (an erstwhile princely state of Orissa in India, where this plant was found) had a monopoly right to Bhramaramari, probably because of its rarity . A specially appointed tribal priest used to collect the timber of this plant and then send it to the royal palace for charitable distribution by the King.

When the plant became extinct in Keonjhar, the tribal priest maintained his supply by sending roots of *Sahajamari*, said to be a substitute of Bhramaramari. However, this was not disclosed to the people and they thought that what they were getting was Bhramaramari. The revelation came only after the enquiry made by this author.

The controversy regarding Bhramaramari is centered on its existence and identity. While some botanists dismiss the existence of this plant as purely imaginary, some others simply quote Kirtikar and Basu (authors of *Indian Medicinal Plants*, first published in 1918) to identify it as nothing but *Antiaris toxicaria*.

However, the author has found evidences to challenge such conclusions. For ex, if it was *Antiaris toxicaria*, why then the descriptions of Kirtikar and Basu did not coincide with that of Bhramaramari in some of the Oriya literatures?

All these evidences suggest for a fresh research to be undertaken so as to verify the true identity of Bhramaramari and also, its possible beneficial uses.

¹ E-mail address: bikash1968@hotmail.com; sunlit1968@yahoo.co.in; vasundharanr@satyam.net.in

² Evolved as a Research & Policy Advocacy group, VASUNDHARA is a non-governmental organisation focusing on the rights of communities over the local natural resources as well as their role in the protection & management of the same for a sustainable livelihood. The organisation is involved in research and documentation work on medicinal plants as a part of its endeavour to address issues relating to the NTFPs.

1.OBJECTIVES:

This paper is the first ever scientific and comprehensive documentation of the legend and controversy of Bhramaramari. The objectives of this presentation are as follows:

- To make the scientific community aware that the identification Bhramaramari as *Antiaris toxicaria* is questionable.
- To highlight the significance of Bhramaramari in the indigenous health care systems of India.
- To suggest the methodology for and facilitate further research on Bhramaramari so as to unravel its mystery.

2.INTRODUCTION:

A number of medicinal plants have been under the ‘controversial’ category due to either their unresolved identity, unverified properties, or some other reasons. An example is *Rasna* (a species hailed for its effectiveness in the treatment of rheumatism) against which atleast three different plant species are named, viz., *Vanda roxburghi*, *Pluchea lanceolata* and *Saccolabium papillosum*.

Bhramaramari is one such controversial medicinal plant. The word is a conjunction between two Sanskrit words: *Bhramara* (which literally implies to the bumble bees) and *Mari* (which means ‘the killer’). Thus, Bhramaramari literally means the killer(plant) of bumble bees¹.

This plant has long been hailed for its potential in the treatment of leprosy. The controversy regarding this species is of the following nature:

- If the plant really exists/existed anywhere.
- If its existence is true, then what is its true identity(botanical).
- Whether it really possesses(ed) extraordinary power to cure leprosy.
- Exactly how does it cause the death of bumble bees [for ex., are the bees killed coming in contact with its latex(if any)?].

3.MATERIALS AND METHODS:

The research conducted by this author was based on the information available in/from secondary references like publications/texts on Ayurveda; personal communication with those people who were, in one way or the other, connected with the traditional use of Bhramaramari, and personal communication with researchers who have adequate knowledge on *Antiaris toxicaria* as well as with some of the local experts(scientists) on botany.

¹ Not to be confused with Bhramaramala or Bhaunramala, some of the plants belonging to the genus *Clerodendrum* .

Field visits were an integral part of the study. Data collected from various sources was analysed and on the basis of a comparative study, the anomalies were discovered. However, the study could not proceed further due to want of funds and opportunity.

4.RESULTS & DISCUSSIONS:

4.1 Ignored Controversy:

Some 15 years back, an article on the threatened flora & fauna was published in the highest circulated Oriya daily 'The Samaj'. It was in the concluding paragraph of this article that the author mentioned the status regarding Bhramaramari as follows:

“There was a tree called Bhramaramari in Orissa. Scientists are still in search of this plant. This is said to be highly efficacious in the treatment of leprosy. The tribals of Keonjhar claim that this plant exists near a stream in some hill forest. It is said that they do not allow for its identification.”

This prompted the author to make an enquiry on the status and nature of this apparently mysterious plant and in this endeavour, he discovered that there were three different groups of botanists in the state so far the said enquiry was concerned. The first group just calmly said that there was nothing to be bothered about Bhramaramari since this plant was found in abundance in the Western ghat hill forests of South India. This author, however, found that their lackadaisical attitude was not based on any current research or original research of their own, but on a reference book (*Indian Medicinal Plants* by Kirtikar & Basu) originally published more than 80 years ago which simply mentions that *Antiaris toxicaria* Lesch. (Moraceae family) is called “Bhoonromari” in Uriya (Oriya, the language of the people of Orissa). *Bhoonro* is a synonym for *Bhramara* in Oriya and since *Antiaris toxicaria* is abundantly found in the Western ghats, hence this conclusion.

The second group dismissed the very existence of Bhramaramari by saying that it was an imaginary plant and could not be *Antiaris toxicaria*. On the other hand, there was a third group of botanists also which was simply unaware of this controversy.

4.2 Challengeable Conclusion of Kirtikar & Basu:

While concluding *Antiaris toxicaria* as ‘Bhoonromari’, Kirtikar & Basu have not cited any source or evidence against that. On the other hand, their descriptions of *Antiaris toxicaria* do not correspond to that of Bhramaramari found in some of the Oriya literatures. The major contradictions thus found are:

- Only one Sanskrit name (*Valkala*) of *Antiaris toxicaria* is mentioned in Kirtikar & Basu whereas Purnachandra Bhashakosha, a great encyclopaedic lexicon in Oriya published in 1930s, mentions seven Sanskrit synonyms of Bhramaramari without any reference to *Valkala*.

- Bhramaramari has long been hailed for its power in eliminating leprosy from the patient's body and thus, one of its Sanskrit names is *Kusthari* which literally means 'the enemy of leprosy'. However, in Kirtikar & Basu we find no mention of any such use or property of *Antiaris toxicaria*.
- Purnachandra Bhashakosha says that Bhramaramari is abundantly found in the Malava (Malwa) kingdom which belongs to north-western region¹ of India and comes under the semi-arid climatic zone. On the other hand, *Antiaris toxicaria*, which requires rain over five months and greater than 2000 mm per year, is known to be endemic not to this region but to an area further south (e.g., the Nilgiri hills) .

It is significant to note that in Chopra *et al* (which was first published in 1933) we do not find any mention of an Oriya name for *Antiaris toxicaria*. It seems that since Bhramaramari was considered to be fatal for the bumble bees and *Antiaris toxicaria* was also believed to have similar effects on all living beings coming in its contact, hence the latter was concluded to be Bhramaramari. In fact, this kind of mistaken identity is not the only case in Kirtikar & Basu because another species *Litsea polyantha/monopetala* has been mentioned therein as the Gajapippali (Sanskrit) whereas the latter(Gajapippali) is actually identified as *Scindapsus officinalis* (see Chopra *et al* and Govt of India).

4.3 Real Existence:

That Bhramaramari is not a 20th century imagination, but a reality atleast in the past(if not present), is evident from a number of independent descriptions as detailed below:

- Royal records of the ex-state of Keonjhar (merged with Orissa as a district in 1948) describe how requisitions were received from outsiders for the kind release of Bhramaramari medicine by the King of Keonjhar who had a monopoly right to the latter(Mishra:1988). Each year, on certain auspicious occasions, a tribal priest, who had access to this plant, used to collect its timber for charitable distribution by the King. Vaikuntha Rana (followed by his son), the last royal physician of Keonjhar State who was authorised for its distribution on behalf of the King, even published a leaflet in the vernacular language describing the method of preparation of this medicine for use by the leprosy patients.
- In Tripathy, we find some notes on Bhramaramari which say that by taking its *churna*(powder) or *kwath*(extract), all kinds of leprosy² are cured.
- In probably the most significant confirmation, an Ayurvedic Pharmacy of Berhampur(an important town in southern Orissa) M/S B.S.Rao and Brothers

¹ An ancient kingdom, it comprised a large portion of the present day Madhya Pradesh and also parts of southeastern Rajasthan. The British took administrative control of the area in 1817(source:<http://www.mewarindia.com/ency/mai.html>). Indore city belongs to this region and receives an average annual rainfall of 1050 mm (source:<http://www.travelomart.com/travel/newsite/states/madhya/indore.htm>).

² Ayurveda distinguishes 18 types of *kustha*(leprosy) most of which are however not recognized as leprosy proper, but as other kinds of skin disease in Allopathy.

published an exclusive advertisement on Bhramaramari in 1939 claiming that they had 'by good fortune' acquired this extremely rare and 'divine'¹ plant. The advertisement described, along with the properties of Bhramaramari, four different kinds of preparations(including the injectable one) made from it and proclaimed that herbal practitioners experienced in making medicines for leprosy could visit their firm and have a view of this plant, but photography or leaf collection would not be allowed.

Besides the above, independent description on Bhramaramari is also found in Purnachandra Bhashakosha, as stated earlier. All these suggest that this was not based on any imagination. Significantly enough, the nomenclature of Bhramaramari does not seem to be just a speculation but based on certain facts because, among the seven synonyms of Bhramaramari in Sanskrit, four are exclusively constituted after the name of bumble bee (in Sanskrit). These synonyms are: Bhramarā (Bhramari), Bhrungāri², Bhrungamari and Bhramarāri.

4.4 Current Status:

“xxxx It is said that there exists a single tree of this species in Keonjhar xxxxxx,” observed Purnachandra Bhashakosha while describing Bhramaramari.

When this author visited the place of the tribal priest(whose forefathers supplied Bhramaramari to the King) in a remote village of Keonjhar, he confessed to have never seen Bhramaramari and that, his father introduced him to *Sahajamari* substituted for (and in the name of) Bhramaramari without publicly disclosing that it was not Bhramaramari (*personal communication*: Bhimasen Mohapatra, 10-07-1999). Hence, it seems that the plant probably became extinct in the state during the later half of 20th century either due to unsustainable exploitation or lack of conservation.

The next and most direct evidence about its finding was in the advertisement published by M/S B.S.Rao & Brothers in 1939. Interestingly, it stated that the plant being immature, collection of raw material from it was possible in small amounts only as a result of which the production of medicine was also limited. Nine years later the same Pharmacy published another advertisement on Bhramaramari (vide *The Prajatantra*, 15-4-1948), but this time it did not invite anybody to have a view of the plant nor did it claim to have possessed it. However, it did mention some new type of preparations made from Bhramaramari in addition to the four mentioned in the 1939 advertisement.

¹ This plant(and the medicine therefrom) was considered to be of divine nature due to its extreme rarity and wonderful therapeutic powers. Thus, certain religious rituals were associated with it in Keonjhar, both during the process of extraction/supply and administration. Indiscriminate exploitation was prevented through such practices (later degenerated due to a number of reasons), thus ensuring sustainability of the plant for some time.

² *Bhrunga* means bumble bee.

Eminent botanist of Orissa Prof.(retd.) Harihar Patnaik told this author that although he himself had never seen any such plant, he did see, during his college days some time in mid-1940s, a piece of timber among the exhibits the label on which read 'Bhramaramari'¹(*per com.*,24-6-1999). Moreover, witnesses confirm that some kind of activity relating to Bhramaramari continued in Orissa in the later period also.

Like the Keonjhar royal family, the Nayagarh(another former princely state of Orissa) royal family has also been associated with the distribution of Bhramaramari for the last three generations. Some of that old stock(small pieces/'flakes' of timber as collected by the author) still remains with Surendra Singh(and his mother), a descendent of the latter family, who gives it to the patients of leprosy on request and personal approach.

Presently, some people claim to have seen Bhramaramari independently (each of them recognised the plant by seeing dead bumble bees under it). One of them, a journalist of Keonjhar, claims to have noticed one such plant accidentally in 1984 in the Kalapat(West) Reserve Forest of Keonjhar(*per com.*: S.N.Mishra, 10-7-1999). The other observer was a NTFP-lessee who, while moving inside the forests of Karada Range in the central Orissa sometime in October, 2001 for the assessment of the potentiality of some particular NTFP(Non timber forest products) of that area, suddenly found a bumble bee approaching a small tree and then lying dead. His tribal friends told him that this was the Bhramaramari plant whose bark(?) was highly valuable (*per com.*: Govind Agrawala, 16-02-2002). Besides these two cases, the author came across a number of other individuals who claimed either to have seen the plant themselves or to be capable of supplying the Bhramaramari timber on order.

4.5 Many Confusions:

Examination of the available information on Bhramaramari gives rise to a number of confusions which are outlined in the following:

- Exactly which part(timber, root, or bark) of the plant was used for medicine?
- Except in the advertisement published by M/S. B.S.Rao and Brothers, no other publications indicate that it is poisonous. Does it mean that the said Pharmacy actually used *Antiaris toxicaria* as Bhramaramari?
- Administration of the 'flakes' distributed by the Nayagarh royal family is very simple: no additional ingredients, no complex preparation; only the flake is to be rubbed against a stone along with some water or cow's milk and the dark coloured liquid thus obtained is to be applied on the affected parts of the body as well as orally consumed. However, the preparations of Vaikuntha Rana and B.S.Rao & Brothers are very complex ones. What caused this difference?
- Some people believe that there is no particular species as Bhramaramari and that certain species attain 'Bhramaramarihood' due to some ecological changes. Is it true?

¹ Some years later when he searched for that specimen in the same laboratory, it was not found.

5. NEEDS AND SUGGESTED METHODOLOGY FOR FURTHER RESEARCH:

All the above confusions can be resolved only through an intensive research. Unfortunately, this has not been possible for the author so far mostly due to the want of sponsorship. Also, approach to some of the organisations involved in the research on medicinal plants in India has been but futile.

A research project on Bhramaramari would have the following components:

- Field survey for tracing out any such plant in the speculated potential regions of Orissa and/or other states of India.
- Restudying *Antiaris toxicaria* so as to determine if it has any resemblance to Bhramaramari.
- Archival research for documenting whatever information/clues available (if any) on Bhramaramari in Orissa/India.
- Pharmacological investigation of the flakes claimed to be of Bhramaramari to see if it has any effect on the germs of leprosy. In case the result is positive, the next step would be to find if it has any chemical resemblance with the timber of *Antiaris toxicaria*. If , however, the result of this second step comes negative, then a genetic analysis may help determine its botanical affinity.
- Field as well as laboratory investigation of Sahajamari.

6.ADVANTAGES OF FURTHER RESEARCH ON BHRAMARAMARI:

We have searched for the mummies of Egypt for sheer curiosity, we have also searched for the Titanic responding to some intellectual urge. Why can't then we search for a medicinal plant, which ,if found, can add some new trends in medical research? Because,

What if all the inferences come negative?

There is a possibility that all or most of the claims regarding Bhramaramari may be found baseless through modern research (like the discovery made by the author that a different item was used in its name in Keonjhar for quite some time). But any such negative inference would never succeed to bury the mystery and glory of Bhramaramari since there will still remain a number of questions unanswered. On the other hand, confirmation of Bhramaramari as *Antiaris toxicaria* would help researchers utilise the latter for some more useful purposes hitherto unknown.

Bhramaramari has been claimed to be beneficial in a number of diseases like *Sotha*(oedema), all kinds of skin diseases(including leprosy) as well as tumours. Particularly, a popular medicine for the treatment of leprosy can be prepared from it and used in the leprosy eradication programme when the patients are still confused/sceptical and/or careless about the allopathic MDT(multi drug therapy). It has been reported that despite an official claim of decline in the number of leprosy patients in Orissa, it is actually rising due to a number of reasons. In fact, Jharsuguda district of this state is said to have the largest number of leprosy patients (21.2 per thousand people) in the

world(*The Sambad*, 25-11-02). However, treatment of leprosy through Bhramaramari is still in the minds of the people and this can be well-utilised in initiating a new campaign against leprosy.

ACNOWLEDGEMENT

Our sincere thanks are due to:

Dr. Harihar Patnaik, Cuttack; Dr. M. Brahman, Regional Research Laboratory, Bhubaneswar ; Dr. P.K.Panda, Regional Plant Resource Centre, Bhubaneswar; HKM State Library, Bhubaneswar; Orissa State Archives, Bhubaneswar; Orissa State Museum, Bhubaneswar; Pandit Madan Mohan Mishra, Keonjhar; PCCF's Office Library, Bhubaneswar; Smt. Padma Dei and Sri Surendra Singh, Nayagarh; Sri Banambar Das, Barapalli; Sri Bhimasen Mohapatra, Kuntala; Sri Gourishyam Patnaik, Ranpur; Sri Govind Agrawal, Bagdihi; Sri Maheswar Patra, Keonjhar; Sri Purusottam Rana, Keonjhar; Sri Sanjay Mohapatra and Mr. Firoz Khan, Keonjhar; Sri Satya Narayan Mishra, Keonjhar; Sri Utkarsh Ghate, Bangalore; and The Prajatantra Office Library, Cuttack.

The author is grateful to Winrock International India for their financial support to make this presentation possible. He is also thankful to the Director, VASUNDHARA; Ms Neera M. Singh & Sri Kundan Kumar; and also his former colleague Pritam Nanda for their moral support in this endeavour.

REFERENCES

- Agnivesh Maharshi, *Charak Samhita*, Vol.II, 2002
 - Chopra R., Chopra I., Handa K. & Kapur L.; *Indigenous Drugs of India*, 1994
 - Govt of India, *The Ayurvedic Pharmacopoeia of India*, Part-I, Vol.II, 1999
 - Jain S.K. & Sastry A.R.K., *Threatened Plants of India: A State-of-the-Art Report*,1980
 - Kirtikar K. & Basu B., *Indian Medicinal Plants*, Vol.III(rewritten & revised by Blatter, Caius & Mhaskar), 1981
 - Leaflet on Bhramaramari published by Birabhadra Rana, Keonjhar (undated)
 - Mishra Pandit M.M., *Kendujharara Eka Divya Oushadha*, Souvenir of the District HQ Hospital(Keonjhar), 1988
 - *Purnachandra Bhashakosha*, Vol.V, 1936
 - Saxena H. & Brahman M., *Flora of Orissa*, Vol.III, 1995
 - *The Deshakatha*,12-11-1939,Cuttack
 - *The Prajatantra*, 15-4-1948, Cuttack
 - *The Samaja*(date unknown), Cuttack
 - *The Sambad*, 25-11-02,Bhubaneswar
 - Tripathy Brajabandhu, *Dravyaguna Kalpadruma*, Vol.II, 1953
-