

‘Agia Vaital’: The People’s Belief About Natural Fire in Forests and its Link with *Pygmaeopremna herbacea* (Roxb.) Mold. in Chhotanagpur Plateau, India

Kaushal Kumar*, A. K.S. Rawat, Ch. V. Rao and Subha Rastogi

* Ethnobotany Laboratory

National Botanical Research Institute, Lucknow- 226001 (India)

Issued 23 August 2006

Abstract

Tribal, forest dwellers and rural people of Chhotanagpur plateau in India, call abrupt fire in forest as ‘Agia Vaital’. This may be anthropogenic, but in traditional myths, it is believed as natural. *Pygmaeopremna herbacea* (Roxb.) Mold. is a potential ethnomedicinal plant and every year it suffers with periodic forests fire in summers. The rosettes of two to three pairs of leaves of this stem less herb lies flat on the ground. In hot temperature during summer the blaze of fire, without any human cause has been observed by the people of the region in the forests of the plateau and due to this fact the plant is known as ‘Agia Vaital’. The people’s observation and information based on the plant related with forest fire would be useful for forest management and preservation of the valuable plant species in wild.

Keywords: *Pygmaeopremna herbacea*; ‘Agia Vaital’; forests fire; Chhotangpur Plateau

Introduction

Forest fires are a global problem. The forest ecologists, environmentalists and conservation biologists are always trying to solve the fire incidence of forests and protection of valuable flora and wildlife. There are many causes of forest fire, may be anthropogenic or natural. Any kind of contact of fire with dried vegetable materials may create forests fire. The loss of biodiversity, depletion of rare and endangered species and crisis of eco-balancing due to forests fire have been assessed from time to time by the state and Central government.

Indeed, ‘Agia Vaital’ is a folklore word and used by the forest dwellers, tribal and rural people for the sudden flaming of fire in forests. The meaning of ‘Agia Vaital’ is the evil spirit who creates fire in forest. It is also a myth and belief among forests dwellers that the ‘Van Devi’ (goddess of forests) sometimes becomes wrathful due to cruel harvesting of forest products, cutting of young plants and hunting of tigers, elephants, deer’s, birds and other wildlife. She gives order to ‘Agia Vaital’ (own devotees spirit) to create fire to prohibit the human entry in forests to perform a critical situation for wildlife to immediate leave the forests, run away to another forests and safe places to save own life. There are many mythic stories about ‘Agia Vaital’ and ‘Van Devi’ in tribal and rural folk. According to the observation of some tribal and rural people the starting process of ‘Agia Vaital’ is also due to the rubbing between two bamboos in the high velocity of wind. The other causes of forests fire are likes coal burning, pieces of fired smoking materials thrown by any person in dried leaves, stone

friction etc. Since ancient period, the forest fire is known as 'Davaagni' in Indian subcontinent. It may possible that the Sanskrit name of forest fire i.e. 'Davaagni' is used for 'Agi vaital' in folklore.

***Pygmaepremna herbacea* in Chhotanagpur plateau**

Pygmaepremna herbacea (Roxb.) Mold. (Verbenaceae) is widely used in ethnomedicine in Jharkhand and adjacent state of Chhotanagpur Plateau in India. The plateau is a part of Deccan peninsula and a hot spot of endemic and genetic diversity of Indian flora. The tract of the plateau is lies between 22° and 25° North latitude and 84° and 87° longitude. The plant is mostly occurs on hilly tracts, near mountainous chain throughout Chhotanagpur plateau in tropical deciduous and semi-evergreen forests. It is associated with *Shorea robusta* Gaertn.f., *Lannaea coromandelica* (Houtt.) Merr., *Acccia catechu* (L.f.) Willd., *Buchanania lanzan* Spr., *Butea monosperma* (Lamk.) Taub., *Madhuca longifolia* (Koen.) Mac Bar. var. *latifolia* Chev., *Diospyros* spp. etc. in the forests. The plant is also found in subtropical Himalaya, Indo- Gangetic plains, Orissa, Bengal and in Sikkim Terai extending to the southern portion of the western peninsula and Tamil Nadu. It is known as 'Bhumjabu' (Sanskrit), 'Bharangi' (Hindi) and used as substitute of a classical ayurvedic medicine i.e. 'Bharangi' (*Clerodendrum serratum* (L.) Moon.) raw materials for the preparation of 'Bharangigud' and 'Bharangyadikwath'. In Siddha system of medicine, it is used for the treatment of fevers, inflammation, rheumatism, and respiratory disorders and as a sedative.

However, its utilization pattern in Chhotanagpur plateau in the state of Jharkhand, and Chhatisgarh is much interesting. Almost all tribal communities residing in the region know about this important medicinal plant and they use it in primary healthcare for the treatment of rheumatism, arthritis, gout, atrophy, cholera and sexual disability. The tribal names of the plant in Plateau are viz. 'Kadamet', 'Kadachandi', 'Phinjamun' (Santhal), 'Aganyo' (Sauria Paharia), 'Gatia' (Mal Paharia), 'Ote atil ba' (Oraon), 'Hora chalu', 'Ote atil ba' (Munda), 'Sande Saber', 'Gitia' (Kol), ' Girahbat' (Ho), 'Tholkobat' (Asur), 'Gathiabat' (Baiga) and 'Kamraj' (Gond). The medicinal woody rootstock is also sold by the tribal medicine men in tribal and rural market among indigenous people.

Mythical 'Agi Vaital'

During our extensive field survey in Jharkhand to collect the samples of woody rootstock for bioprospection of ethnobotanical plants of Jharkhand state the valuable information gathered from the tribal, rural and forests dwellers of Chhotanagpur plateau that sometimes blaze of fire have been seen in the plant. *Pygmaepremna herbacea* is a stem less herb or undershrub from a woody rootstock. A voucher specimen (no. 225814) of the plant has been collected and deposited in NBRI, Herbarium. The flowering branches of the plant is 2.5-10 cm long, leaves 5-14x 3-6 cm, in rosettes of 2-3 pairs, lying flat on the ground or closely appeared, sessile, obovate, obtuse and cuneate at the base, flowers white or greenish-yellow, in peduncled cymes arranged in terminal. The woody rootstock is mostly brown in colour and 0.5-2 x 0.3- 1.5 cm in size continuous ca 0.5-9 cm interblend. The flowering & fruiting period of the plant is August to December. After the end of January the herb started to dry and the beyond the fruits dispersal the dried leaves are closely attached in stiff soil. In hot day,

mostly in the month of May in the warmed soil in contact of dried leaves of the plant strike due to any cause creates fire. This fire is as a myth and belief of the region known as 'Agia Vaital'

H. H. Haines, a conservator of the forests of British India and the author of 'The Botany of Bihar and Orissa' (1925) also inculcated with this plant and stated that it is curious herb. He has mentioned in his work that the shoots are apparently annual and the new ones appear after the jungle or grass fire. However, he described the flowering season May-June and fruiting season June-July found different in our observation.

Conclusion

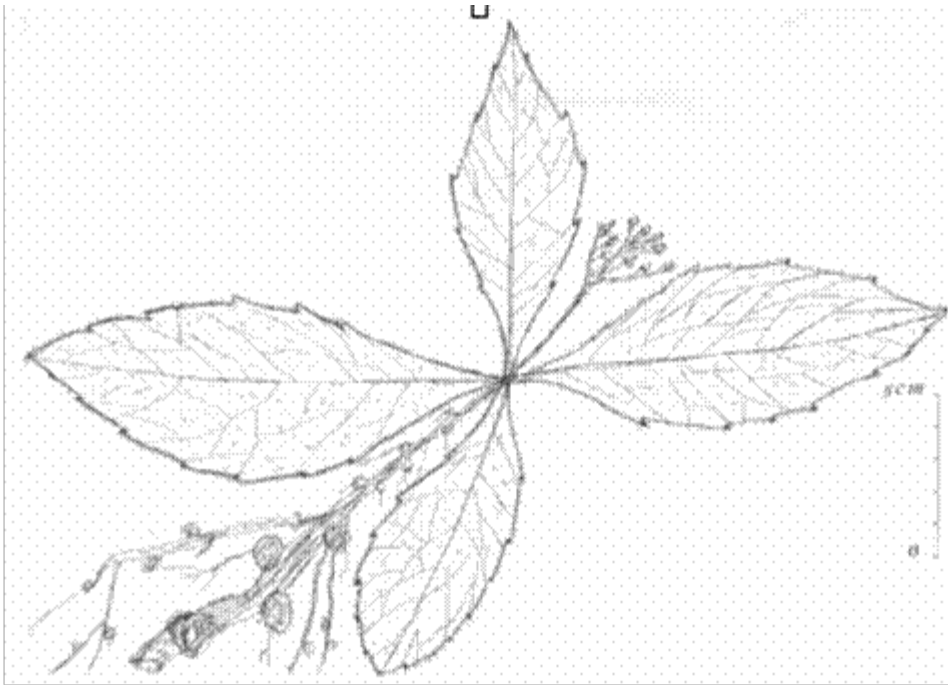
There are some plants like *Anaphalis triplinervis* Cl. (Asteraceae), *Balanites aegyptiaca* (L.) Del. (Simaroubaceae), *Calophyllum inophyllum* L. (Clusiaceae), *Cousinia thomsonii* Cl. (Asteraceae), *Lycopodium clavatum* L. (Lycopodiaceae) etc. are used for making fire (Jain, 1991) for domestic purpose by the tribals in India. The *Pygmaeopremna herbacea* is not used for domestic fires and our observation is not related with the above information. The natural fire sometimes created in the forests of hilly tracts during hot days in summers and very close arrangement of leaves in plant on ground may help in flaming. Due to destruction of natural forests and over exploitation and the above kind of natural fires in forests, the plant it has become rare in the forests. Therefore, there is a need for *ex-situ* conservation and protection of this valuable medicinal plant for sustainable utilization. The information related to fire burning in *Pygmaeopremna herbacea* would be useful for the precautionary steps taken by the foresters. There are any chemicals which are inflammable should also be investigated. I there are not above chemicals then the factors associated to because fire may scientifically interesting for observation. The ethnobotanical information gathered from the field pertaining to the plant presented here for further studies.

Acknowledgments

We are thankful to Director, NBRI, Lucknow for providing facilities and to Ministry of Environment & Forests, Govt. of India, New Delhi for financial support.

References

- Haines, H. H. 1925. *The Botany of Bihar and Orissa*, BSI Calcutta (reprint ed. 1961), II: 753.
- Jain, S.K. 1991. *Dictionary of Indian Folk Medicine and Ethnobotany*, Deep Publications, New Delhi.



***Pygmaeopremna herbacea* (Roxb.) Mold.**



Root stocks of *Pygmaeopremna herbacea* (Roxb.) Mold.