



- Wide spreading canopy, maintains microclimate
- Shelter for birds, bats, rodents
- Spreading root system stabilizes soil
- Stores a good amount of carbon di oxide
- Socio-religious meeting place; a symbol of social connection



Socio-Cultural History of Old trees

An exploratory project by

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Abstract

Old trees are synonymous with our social and cultural connections with nature. Many of us can recall the existence of old banyan/peepal/neem/mango trees in our surroundings which was remarkable landmark for multiple purposes. In course of time, many of them received the heat of development and wiped away from our landscape. Hardly we keep an account on their presence and the services they provide to us.

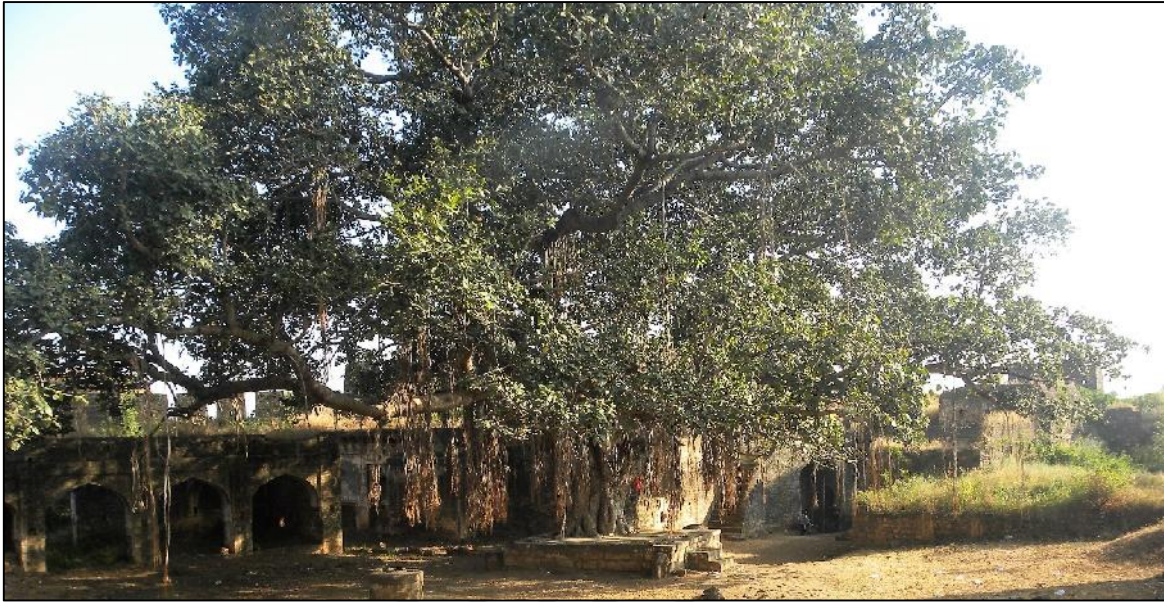
In order to fulfill the gap, my aim is to document their diversity, exploring the connection with local community, assessing threats they perceive and finally raising awareness. The project output will be a valuable addition to our environmental knowledge base and a commitment to keep our age long biological heritage alive in our society.

From time immemorial, plants especially old trees have an intricate entanglement with the human society. Apart from the materialistic standpoint, their mighty presence in the diverse background has been deeply revered for centuries or even millennia. In tropical countries like India, where old trees are abundant in landscape but hardly receive proper attention and care from society at large. Beyond their religious and social importance, they are not taken seriously by us. Obviously, felling and uprooting of old trees disturb us, but their absence from our lives is barely felt owing to a lack of awareness on their role in nature.



I intend to bridge this gap by observing and studying big and old trees in the heterogeneous landscape, i.e. a mixture of different land use types (e.g. agriculture, plantation, village, small-scale industries etc.). Apparently, the common notion about rural landscape emphasizes on its greenery and availability of trees but a careful observation can compel us to view it differently. It is due to agricultural and industrial expansion we are losing our rural plant diversity which is often replaced by economically important species be it timber or cash crops. Undoubtedly, it may offer an instant benefit to the society, but in long run, we are losing other members vital for the natural system. Although, old trees are venerated by people and are protected often, their

surroundings are not supportive of their existence in long run. Activities like trimming branches, curtailing root growth by cementing the base, driving away beneficial fauna etc. cumulatively affect tree health and its future generation. It might sound minimal, in course of time, it may create a big vacuum in the ecosystem in terms of biodiversity conservation, micro-climate maintenance, carbon storage and other benefits.



In rural landscape, informal tree conservation and management are part of the society which has often been expressed through cultural-religious practices. However, rapidly changing perception towards nature is gradually modifying our attitude of protecting these woody giants. As a result, either trees are cut down for other requirements or they are protected but secluded from their surroundings ultimately paving the path of their destruction.

In this exploratory work, I will address a few basic questions related to their distribution, diversity and association with the local community. The work will be conducted across multiple villages in central and southern West Bengal amidst diverse landscape, combining field ecological methods, local community survey and spatial techniques for documentation, mapping and conservation status assessment of these old trees.

The work plan is initially for one year and it requires funding for field expenses like the appointment for the project assistant and local guide, logistics (accommodation and food), transport expenditure and procurement of GPS machine for mapping purpose.

This study will generate baseline information on old trees and their status which will be helpful to identify heritage/culturally-religiously significant trees (e.g. where are they located, what is their status? If they are protected well? What could be the future scenario?) and develop a strategic plan for their protection. Moreover,

an interaction and involvement with the local community will be an added advantage to spread the awareness and sense of responsibilities towards these old trees. In a broader sense, this work is an attempt to document and preserve our biocultural heritage in a rapidly changing world when the planet is facing the unprecedented threat from climate change and habitat destruction.



Researcher Biography



Dr. Rajasri Ray is a senior plant science researcher. She is working on Sacred grove ecosystem and ecology, species conservation and climate change aspects. She has work experience in the Western Ghats, The Himalayas and Central India. Her research publications cover important aspects of medicinal plant conservation, certification, sacred grove hydrology, landscape value and functional importance and also topics based on GIS and ecological niche modelling.

Important publications

Rajasri Ray, T.V. Ramachandra and Avik Ray (2018) Phylogeography of a rare and endemic tree of Western Ghats reveals its ice age dynamics. *PeerJ Preprints* | <https://doi.org/10.7287/peerj.preprints.27043>

Avik Ray and **Rajasri Ray** (2018). The Birth of Aus Agriculture in the South-eastern Highlands of India – an Exploratory Synthesis. *Ancient Asia*. 9, p.3. DOI: <http://doi.org/10.5334/aa.146>

Rajasri Ray, Sreevidya E.A. and T.V.Ramachandra (2017) Functional importance of sacred forest patches in altered landscape of Palakkad region, Kerala, India. *Journal of Tropical Ecology* 33(6):379-94

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Rajasri Bhattacharyya, Aparna Asokan, Prodyut Bhattacharya and Ram Prasad (2009) The potential of certification for conservation and management of wild MAP resources. *Biodiversity and Conservation*, 18:3441-3451. (DOI 10.1007/s10531-009-9653-z)

