

BIODIVERSITY CONSERVATION THROUGH A SACRED GROVE

Ram Kumar Bhakat

Department of Botany & Forestry, Vidyasagar University
Midnapore-721 102, West Bengal, India

ABSTRACT ■ Socially protected forests are known as sacred groves. This article attempts to highlight the role played by *Chilkigarh Kanak Durga* sacred grove in West Bengal towards conservation of regional plant and animal diversity including few threatened species. This study recommends to protect the sacred grove.

Key words: Diversity, Conservation, Sacred grove, West Bengal.

INTRODUCTION

Forest worship is a practice distinct from the worship of individual and isolated trees in tribal areas of South West Bengal. In forest based life, this practice stems from the fear of inaccessible forest and nature. Each moment of human lives, from birth to death, being influenced and shaped by plants/forests, forests assume a centrestage position in social life and folklores. The forests are regarded as abodes of deities and supernatural powers and spirits. As a result, parts of forests become sacred wherein free human access is strictly prohibited. The entire geographical area of the forest is considered sacred. These religiously protected forests, sacred groves as they are called in biological parlance, harbour few old trees, shrubs, herbs and climbers, and support a large number of animals including

megafauna (Bhakat, 2003, 2006). In essence, these sacred groves are storehouses and island of biodiversity. Keeping the above in mind, this article highlights the conservation value of a sacred grove situated in a tribal belt of South West Bengal.

THE LOCATION OF THE SACRED GROVE

The sacred grove under study, popularly known as *Kanak Durgar Jungle* (temple forest of Kanak Durga), is situated about 57 km north-west of Kharagpur (SE) railway station in village Chilkigarh under Jamboni police station of West Midnapore district in West Bengal along the border areas of Jharkhand and Odisha. The grove houses the historically famous temple of Kanak Durga (a forest goddess). It is multitiered and multispecific in composition, consisting of mixed vegetation of deciduous, semi-deciduous and

* Corresponding author : e-mail: rkbhakat@rediffmail.com

evergreen trees. The grove is spread over a 60-acre private land, and is bounded by cropfields, households, *Sal* forests and river. Since the entire forest area is dedicated to the deity, local people consider it as sacred and no part of it is disturbed. Even cutting and removal of any plant or plant part is a taboo. (Fig. 1& 2)

METHODOLOGY:

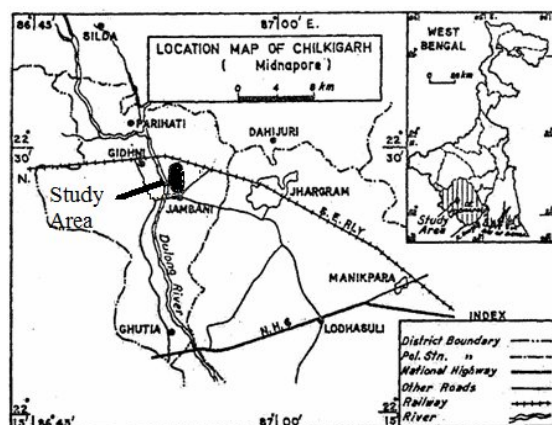


Fig. 1: Map of Midnapore District (undivided) showing the location of Sacred Grove.



Fig. 2: Chilkigrah Kanak Durga Sacred Grove

The present work is updated account of the authors earlier findings from 2003-2010 (Bhakat 2003, 2009, 2010) and Bhakat and Pandit (2006).

RESULTS AND DISCUSSION:

Plant Diversity

Floristic survey of the grove reveals 388 species of higher plants. Among the total plants, herbs, shrubs, trees and climbers represent 208, 45, 89 and 46 species respectively. Moreover, the grove supports 11 species with edible fruits, 25 species having sacred value, 10 species used as timber plants, 12 species having firewood value, and 105 species of medicinal plants of which ethno-medicinally significant *Crateva nurvala* (Barun), *Gymnema sylvestre* (Gurmar), *Holarrhena pubescens* (Kurchi), *Rauvolfia tetraphylla* (Sarpagandha), *Strychnos nux-vomica* (Kunchila) and *Tylophora asthmatica* (Antamul) are rapidly vanishing from the surrounding countryside forest areas.

Owing to continued protection, the sacred grove provides optimum conditions congenial for the growth of plants. As a result, some of the floristic elements attain maximum dimensions. A botanist is often confronted here with the unbelievable phenomenon of size and growth patterns of plant associations. Some of the lofty tree species showing grandeur and thus becoming a fascinating sight are *Alangium salvifolium* (Ankar), *Alstonia scholaris* (Chatim), *Anthocephalus cadamba* (Kadam), *Haldinia cordifolia* (Karam), *Holoptelia integrifolia* (Challa), *Mimusops elengi* (Bakul) and *Strychnos nux-vomica* (Kunchila).

Apart from trees, some climbers particularly woody ones show maximum attainable growth patterns often with gigantic shapes. For example, *Bauhinia vahlii* (Latakanchan), a normal feature of deciduous forests of South West Bengal, shows monstrous growth in the Kanak Durga grove. Its meandering branches of 0.4 to 0.5m diameter criss-cross the grove-canopy, often lying above at human height in some places and sometimes resting on forked

tree branches, thus suppressing all other tall shrubs and small trees in between. This type of unusual growth phenomenon of plants in highly protected sacred groves is also reported by researchers in Maharashtra, India.

Animal Diversity

The sacred grove, on account of its locational uniqueness, performs other ecological roles too. Being situated amidst the crop fields and surrounded by dry deciduous forests typical of the South Bengal, the grove plays a dynamic role in balancing different ecosystems including the village ecosystem

of the region. It is an adobe of various creatures whose food chain is connected through a predator-prey interaction. Due to prevalence of near-wild and calm environs typical of protected forest, the grove supports 26 species of megafauna distributed among amphibian, aves, reptiles and mammals (Table-1). Besides, a countless number of forest insects make the grove even more richer in biodiversity. Therefore, there is an urgent need to study these unknown animals in a systematic way.

CONCLUSION

Table-1: Animal Diversity in *Chilkigarh Kanak Durga* Sacred Grove.

Class and Scientific Name	English Name
A. Amphibia	
1. <i>Bufo melanostictus</i>	Toad
B. Reptilia	
2. <i>Bungarus caeruleus</i>	Common Indian krait
3. <i>Calotes versicolor</i>	Common garden lizard
4. <i>Mabuya carinata</i>	Common skink
5. <i>Naja naja</i>	Indian cobra
6. <i>Ptyas mucosus</i>	Common rat snake
7. <i>Varanus bengalensis</i>	Common Indian monitor
C. Aves	
8. <i>Acridotheres tristis</i>	Common myna
9. <i>Bubulcus ibis</i>	Cattle egret
10. <i>Columba livia</i>	Blue rock pigeon
11. <i>Copsychus malabaricus</i>	Shyama
12. <i>Copsychus saularis</i>	Magpie robin
13. <i>Coracias bengalensis</i>	Roller/ Blue jay
14. <i>Dinopium benghalense</i>	Lesser golden backed woodpecker
15. <i>Egretta intermedia</i>	Smaller egret
16. <i>Eudynamys scolopacea</i>	Koyel
17. <i>Orthotomus sutorius</i>	Tailor bird
18. <i>Psittacula krameri</i>	Rose ringed parakeet
19. <i>Pycnonotus cafer</i>	Red vented bulbul
20. <i>Streptopelia decaocto</i>	Indian ring dove
D. Mammals	
21. <i>Bandicota bengalensis</i>	Indian mole rat
22. <i>Felis chaus</i>	Jungle cat
23. <i>Funambulus palmarum</i>	Three striped squirrel
24. <i>Pipistrellus coromandra</i>	Indian pipstrelle
25. <i>Presbitis entellus</i>	Common langur
26. <i>Rattus rattus</i>	Common house rat

The Kanak Durga sacred grove, largest of its kind in West Bengal so far available reports, in essence represents the concept of ancient Indian way of *in-situ* conservation of biodiversity. It still serves as a miniature representative vegetation of the area reminiscent of modern protected areas. Preservation of these species could be of great economic significance. Some of the species so preserved are already of medicinal importance; others could acquire such significance in future. The grove also preserves genotypes which may be used in future tree-breeding programmes. As such it is an excellent outdoor location for conducting scientific studies in terms of silviculture. The forest gives a good clue to the composition of the erstwhile vegetation of the area. Moreover, the sacred grove provides outdoor illustration for the classroom. Students and teachers may have a glimpse of the

environment to understand ecology, taxonomy and community management of a regional biological resource. Therefore, there is an urgent need to protect the grove. And also, this traditional method of forest conservation warrants greater attention and needs to be popularised for human welfare.

REFERENCES

- Bhakat, R. K. 2003. Socio-cultural and ecological perspectives of a sacred grove from Midnapore District. *Science and Culture*. **69**: 371-374.
- Bhakat, R. K. and Pandit, P. K. 2006. Peoples' initiative protects a sacred grove. *Indian Forester*. **132**: 635-640.
- Bhakat, R. K. 2009. Chilkigarh Kanak Durga Sacred Grove, West Bengal. *Current Science*. **96(2)**: 185.
- Bhakat, R. K. 2010. Plant resources of Chilkigarh Kanak Durga sacred grove, West Bengal. *Indian Journal of Forestry*. **33(2)**: 257-269.

