

Floristic Diversity of the Sacred Grove of Madathody Naga Kavu, Chalavara, Palakkad District, Kerala State

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Abstract— An exploratory survey conducted in Madathody Nagakavu is present in Chalavara Gramapanchayath, Ottapalam taluk of Palakkad district, Kerala lead to the collection of 50 species coming under 49 genera and 25 families. Among them, 6 endemic, rare, and red listed plants are represented here and also including 38 medicinal plants.

Keywords— Diversity, Madathody Naga kavu, Palakkad.

I. INTRODUCTION

Sacred groves are the conserved forest patches, or protected areas. The sacred groves in Kerala are tightly bound with religious backgrounds. The conservation is mainly based on cultural, aesthetical, and religion aspects, and in different areas these sacred groves are devoted or dedicated for different Gods i.e. serpentine Gods, Nagadevatha, Nagayakshi etc. Sacred groves are one of the informal approaches of conserving the biological diversity of a region and play an important role in preservation of depleting resource elements such as medicinal plants and occur in India and in other parts of Asia and Africa (Bhandary and Chandrashekar, 2003). According to Nair (1992) in sacred groves the number of herbs and shrubs are reported to be more in the disturbed zone. Due to urbanization and industrialization coupled with rationalization, scarcity of land leading to the depletion of the cover and shrinkage of these areas as a result the large chunk of the areas are diverted for other activities and only a small portion is left with especially adjacent to the temple (Devaraj, *et al* 2005). According to Rajasri Ray *et al.*, (2014) sacred groves may lose their prominence nowadays, but are still relevant in Indian rural landscapes inhabited by traditional communities.

A rough estimate Kerala has about 1500 sacred groves, which are distinct and biologically unique. Sacred groves in Kerala are located mainly in Kasargod, Kannur,

Kozhikode, Thrissur, Palakkad, Ernakulam and Alappuzha districts. Balasubramanyan and Induchoodan (1999) recorded a total number of 761 sacred groves in Kerala State.

In Kerala the common practice among Hindus to assign a part of their land near the Tharavadu or house as the abode of goddess Durga or serpent god Naga or Shasta and the place is called 'Kavu' or 'Sarpakavu'. People are prohibited from felling trees and even removing a twig is considered as taboo. Apart from conserving biological diversity, sacred groves that are situated in the middle of the human habitation are responsible for conserving water and soil.

II. STUDY AREA

Madathody Naga Kavu is one among this and located near Shornur, Chalavara Grama Panchayath of Palakkad district. The management of this kavu is under the control of Madhathody family. The area is about 36 cent. The deity is Nagam. A mud road splits this kavu in to two parts. The present study conducted in the Madathody NagaKavu has resulted in the collection of 50 taxa of angiosperms coming under 49 genera and 25 families. Out of these, 06 rare, endemic, red listed and taxonomically important species are enumerated here. (**Table 1**). The voucher specimens are deposited at the Sree Krishna College, Guruvayur.

III. MATERIALS AND METHODS

The Sacred grove was visited during different seasons and two specimens were collected in each species and these were systematically numbered and tagged. Important field observation like, habit, phenology of the plant, colour, texture and smell of leaves, abundance, local names and local uses available were also noted. Each species in fresh condition was critically studied with the

help of floras like, *Flora of Presidency of Madras* (Gamble, 1915-1936); . The plants were identified with the help of floras and finally by comparing with the reference collections available in the Herbarium of Kerala Forest Research Institute, Peechi. The species were often poisoned, processed and labeled, by standard herbarium methods given by Santapau (1955) and Jain & Rao (1977).

IV. RESULTS AND DISCUSSION

The present study conducted in the Madathody NagaKavu has resulted in the collection of 50 taxa of angiosperms coming under 49 genera and 25 families including 19 herbs, 13 shrubs 10 trees and 8 climbers. Out of 50 species 6 plants are Endemic, 8 Exotic and 38 medicinally important were collected. (Table 1).

Table.1: Species recorded from Madathody kavu

Sl. No	Coll. No.	Botanical name	Family	Local name	Habit	System of Medicine	Status
	105	<i>Ichnocarpus frutescens</i> (L.) R.Br.	Apocynaceae		Climber	A, F, S, T , U	
	196	<i>Mikania micrantha</i> Kunth in HBK	Asteraceae		Climber	-	
	190	<i>Merremia vitifolia</i> (Burm.f.) Hall.f.	Convolvulaceae		Climber	F	
	118	<i>Luffa cylindrica</i> (L.) M.J.Roem	Cucurbitaceae		Climber	A, S, T	
	129	<i>Dioscorea bulbifera</i> L.	Dioscoreaceae		Climber	A, F, S, T, U	
	131	<i>Derris scandens</i> (Roxb.) Benth.	Fabaceae		Climber	-	
	207	<i>Asparagus racemosus</i> , Willd.	Liliaceae		Climber	A, F, S, T , U	
	214	<i>Gloriosa superba</i> L.	Liliaceae	Menthonny	Climber	A, F, S, T, U	
	100	<i>Andrographis paniculata</i> (Burm.f.) Wall.ex.Nees.	Acanthaceae	Gopuramthangi	Herb	A, F, H, S, U	
	205	<i>Ageratum conyzoids</i> L.	Asteraceae		Herb	A, F, S	
	215	<i>Emilia sonchifolia</i> (L.) DC. in Wight	Asteraceae		Herb	A, F, S, U	
	102	<i>Tridax procumbens</i> L.	Asteraceae		Herb	F, S	Exotic
	204	<i>Cleome burmannii</i> Wight & Arn.	Capparidaceae		Herb	-	
	181	<i>Euphorbia thymifolia</i> Linn.	Euphorbiaceae		Herb	A, F , U	
	165	<i>Phyllanthus urinaria</i> , Linn.	Euphorbiaceae		Herb	A, S, U	
	196	<i>Sebastiana chamaelea</i> (L.) Muell.-Arg.	Euphorbiaceae		Herb	F	
	103	<i>Leucas aspera</i> (Willd.) Spreng.	Lamiaceae	Thumba	Herb	A, F, H, S, U	
	176	<i>Osbeckia muralis</i> Naud.	Melastomataceae		Herb	-	Endemic
	108	<i>Mimosa pudica</i> L.	Mimosaceae		Herb	A, F, S, T, U	Exotic
	201	<i>Boerhaavia diffusa</i> Linn.	Nyctaginaceae	Thazhuthama	Herb	A, F, H, S U	
	147	<i>Desmodium gangeticum</i> (L.) DC.	Fabaceae		Herb	-	
	210	<i>Desmodium scorpiurus</i> (Sw.) Desv.	Fabaceae		Herb	-	

	122	<i>Panicum notatum</i> Retz.	Poaceae		Herb	-	
	128	<i>Sporobolus diander</i> (Retz.) P. Beauv.	Poaceae		Herb	-	
	169	<i>Oldenlandia umbellata</i> L.	Rubiaceae		Herb	-	
	181	<i>Spermacoce latifolia</i> Aubl	Rubiaceae		Herb	-	Exotic
	133	<i>Lindernia ciliata</i> (Colsm.) Pennell.	Scrophulariaceae		Herb	-	
	178	<i>Eupatorium odoratum</i> L.	Asteraceae	Communist pacha	Shrub	F	Exotic
	203	<i>Briedelia scandens</i> (Roxb.) Willd.	Euphorbiaceae		Shrub	F	Endemic
	109	<i>Sauropus androgynous</i> (L.) Merr.	Euphorbiaceae		Shrub	F, S	
	265	<i>Hyptis suaveolens</i> (L.) Poit.	Lamiaceae		Shrub	F	Exotic
	134	<i>Leea indica</i> (Burm.f.) Merr.	Leeaceae		Shrub	A, F, S	
	149	<i>Hibiscus hispidissimus</i> Griff.	Malvaceae		Shrub	A	
	171	<i>Sida rhomboidea</i> Roxb. ex Fleming.	Malvaceae		Shrub	AFSTU	Endemic
	186	<i>Memecylon randerianum</i> SM & MR Almeida	Melastomataceae		Shrub	F	Endemic
	153	<i>Chassalia curviflora</i> (Wall ex Kurz) Thw.	Rubiaceae		Shrub	F	
	101	<i>Ixora coccinea</i> L.	Rubiaceae		Shrub	A, F, S U	
	163	<i>Grewia nervosa</i> (Lour.) Panigrahi	Tiliaceae		Shrub	F	
	166	<i>Triumfetta rhomboidea</i> Jacq.	Tiliaceae		Shrub	F, S, U	
	211	<i>Clerodendrum infortunatum</i> L.	Verbenaceae		Shrub	A, F	
	219	<i>Mangifera indica</i> L.	Anacardiaceae	Mavu	Tree	A, F, H, T, U	
	153	<i>Plumeria rubra</i> L.	Apocyanaceae		Tree	A, F	Exotic
	104	<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae		Tree	A, F, H, T, U	
	213	<i>Caryota urens</i> Linn.	Arecaceae		Tree	A, F, S, U	
	125	<i>Cocos nucifera</i> L.	Arecaceae	Thengu	Tree	A, F, S, T, U	
	106	<i>Acacia mangium</i> Willd.	Mimosaceae		Tree	-	Exotic
	174	<i>Artocarpus hirsutus</i> Lam.	Moraceae		Tree	A, F	Endemic
	209	<i>Ficus racemosa</i> L.	Moraceae		Tree	A, F, S, T, U	
	218	<i>Olea dioica</i> Roxb.	Oleaceae		Tree	F, S	Endemic
	169	<i>Gliricidia sepium</i> (Jacq.) Kunth ex Walp.	Fabaceae		Tree	F	Exotic

A: Ayurveda, F: Folk, S: Siddha, U: Unani, H: Homoeopathy, T: Tibetan, M: Modern.

V. CONCLUSION

Sacred groves are considered as store house of rare, endemic and endangered plants because of floristic wealth and biodiversity conservation. Some sacred groves are still remaining in undisturbed state and they help to conserve biodiversity and ecological balance. Medicinal and economically important plants are also present in sacred groves. Due to several construction works in sacred groves, a wide range of flora is disturbed; their extensive population in nature is gradually diminishing. The total area of this kavu is unprotected due to this, exotic weeds are invading to this area. Here endemic plants *Artocarpus hirsuta*, *Bridelia scandens*, *Memecylon malabaricum*, *Osbeckia muralis*, and *Olea dioica* are present. Out of 50 plants 38 are medicinal. Large number of herbs and shrubs are present, but numbers of trees are very less. This shows the disturbance inside the grove. In this circumstance suitable management measures and awareness programmes about the importance of sacred groves are necessary for sustainable utilization of the valuable bioresources. Chalavara Grama panchayath proposed suitable plans to protect these sacred groves.

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