



Traditional worshipping plants from selected sacred groves of Kozhikode District, Kerala, India

Chaithra M. and Binu Thomas*

Department of Botany, St. Joseph College, Devagiri, Kozhikode - 673008, Kerala, India
binuthomasct@gmail.com

Available online at: www.isca.in, www.isca.me

Received 8th February 2017, revised 15th March 2017, accepted 30th March 2017

Abstract

The present paper highlights the religious importance of sacred plants, which are documented from two different sacred groves such as Kanangad kavu and Kavumkara of Kozhikode district, Kerala. During the study, there are about 20 species of plants belonging to 20 genera and 14 families were documented. The religious potentialities of these plants and their role in worshipping god/goddess were also tabulated. The present study also highlights the importance of conserving such sacred patches is an urgent need, because the changes in social belief, modernization and erosion of cultural practices are some of the major factors contributing towards degradation of the ancient institutional heritage.

Keywords: Religious importance, Sacred plants, Kozhikode district, Kerala.

Introduction

Sacred groves are sanctified patches of forests protected by the strength of religious beliefs as abode of Gods and Goddesses. It is believed that the existence of sacred forest dates back to several thousands of years when human society was in the primitive stage of development¹. Sacred groves are also considered as a social institution or a part of the taboos that evolved historically over several generations to provide a site for culturally crucial social interactions. The ancestral practices of animism with the central focus on the worship of forest patches regarded them as the sacred abode of various Gods/deities. However, conservation practices and control over extractive activities in sacred groves vary in different communities and regions². Sacred groves also perform several ecological functions, which can directly or indirectly help in the maintenance of ecosystem health of all interacting landscape units. A sacred grove with their complex array of interaction influences the flora and fauna of the region as well as the microclimate of that locality³. Generally sacred groves are believed to be a treasure house of medicinal, rare and endemic plants, refugia for relic flora of a region and also as centers of seed dispersal^{4,6}.

Sacred groves are a very ancient and widespread phenomenon in the old world cultures. Such groves are one of the finest examples of traditional *in situ* conservation practices, which dates much prior to the modern concept of wildlife reserves⁷. These are patches of natural near-climax pristine vegetation of trees and associate groups of organisms, managed as a part of local cultural tradition⁸. The sacred groves are the representative of climax vegetation and exhibit the diversity of species such as trees, climbers, epiphytes and other shade loving herbs. Their plant wealth and conservation potential were impressive enough

to acknowledge them as 'minibiosphere reserves'⁹. The people worshiped the sacred trees which are associated with sacred forests. These trees are either medicinal or edible plant species and they are protected by the indigenous people because of their cultural and religious importance. Taboos and myths attributed with the sacred groves also protect them from anthropogenic disturbances¹⁰. Sacred groves act as a sort of insurance against emergencies; in cases of famine or other natural disasters food and materials may be collected from the grove to ensure survival^{11,12}.

Materials and methods

Study area: The present study is confined to two unexplored sacred groves such as Kanangattukavu and Kavumkara in Kozhikode district, Kerala, Kozhikode also known as *Calicut*, is a city in the state of Kerala in Southern India on the Malabar coast. The city of Kozhikode is 410 kilometers north of the state capital Thiruvananthapuram. It is located at approximately 11.25°N 75.77°E, in which the rainy season is during the South West Monsoon, which sets in the first week of June and extends up to September. The North East Monsoon extends from the second half of October through November. The average annual rainfall is 3266 mm and the best weather is found in towards the end of the year, in December (Figure-1 A-B).

Kanangad kavu: Kanangattukavu is one of the sacred groves located in Kozhikode District. It is characterized by the increased diversity of shrub and herb species. This sacred grove is located on the South-East region of the Ramanattukara municipality and covers an area of approximately 0.121 ha. This sacred portion of land is devoted to snakes; hence, this is regarded as a 'Nagakavu'. Kanangattukavu is maintained by the members of Kanangad family generation after generation. They

conduct *Saktheyam* and *Kavutheendal* in each year to please the ‘*Nagaraja*’ (Figure-2A).

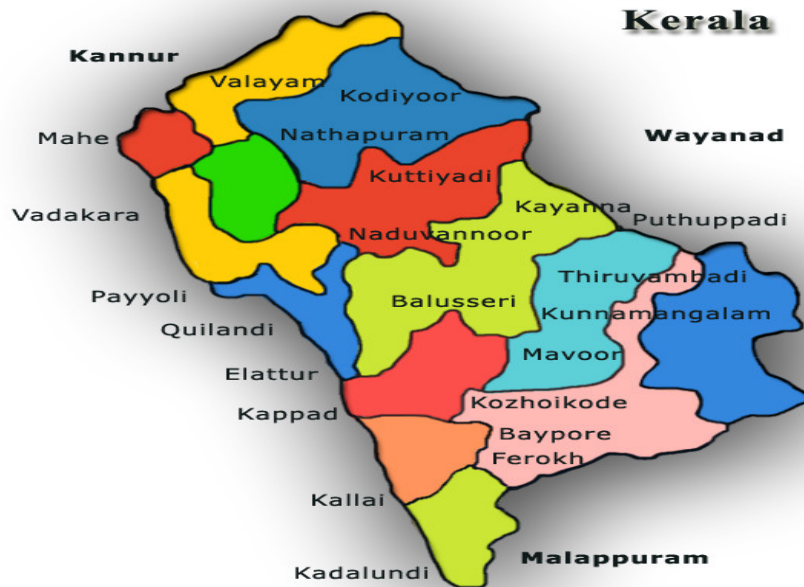
Kavumkara: Kavumkara sacred grove is another sacred grove of Kozhikode District. This sacred grove is located on the South–West region of Ramanattukara municipality. This area is maintained by members of Kavumkara family and they retain this as a well managed the area for years. This sacred grove

covers an area of about 0.2023 ha and is featured by its increased diversity of trees, shrubs as well as herbs. This area forms one of the most tree covered area of Ramanattukara. The maintainers of this sacred grove conduct *Saktheyam* in every year as devotion to the ‘*Nagaraja*’ because it is believed as a region devoted to the inhabitation of Nagas. Hence, this sacred grove belongs to the category of ‘*Nagakavu*’ (Figure-2B).



A) Map of India Showing Kerala State.

Kozhikode District Kerala



B) Map of Kozhikode district

Figure-1: Map of Kerala state & Kozhikode district.



A. Image of the study area – Kanangad sacred grove. B. Image of the study area – Kavumkara sacred grove.

Figure-2: Images of study area.

Documentation: The present study was based on an extensive survey and field observations during the year December 2016-February 2017. In this study an attempts were made to document and analyze religious important plants among the vegetation cover of selected sacred groves of Kozhikode district, Kerala. The documentation was mainly based on the field observation, discussions with local peoples as well as scrutinizing the literature review. During the field visits, the plant specimens were collected at different reproductive stages to prepare herbarium specimens. The collected specimens were identified taxonomically with the help of available floras and literature¹³⁻¹⁵. The nomenclature of each species has been brought up to data as per the rules given in the International Code of Nomenclature (ICN). The specimens were processed for the preparation of Herbarium by standard methods¹⁶. The voucher specimens were deposited in the Herbaria of PG & Research Department of Botany, St. Joseph's College, Calicut (DEV) for future reference.

Results and discussion

The present paper highlights the religious importance of sacred plants, which are documented from two different sacred groves such as Kanangad kavu and Kavumkara of Kozhikode district, Kerala. During the study, there are about 20 species of plants belonging to 20 genera and 14 families were documented. Among these Fabaceae and Asteraceae were the most dominant families with 3 species each, followed by the families such as Rutaceae and Lamiaceae with 2 species each and all others possess single species each. In order to infer the total life forms of documented plants reveals that, trees (7 in no.), shrubs (3 in no.), herbs (7 in no.) and climbers (3 in no.). The religious potentialities of these plants and their role in worshiping god /goddess were also tabulated (Table-1).

Similar studies were conducted by Haritha *et al.*¹⁷. According to them, the religious importance of sacred plants which were documented from four different sacred groves such as Kurinjikavu, Panachikadu Saraswathi Temple, Illapozhuthukavu and Thoovakkalmala Sasthakavu of Kottayam District, Kerala consisting of 56 plant species belonging to 50 genera and 29 families.

Among these 29 families represented Apocynaceae and Moraceae are the dominant families with 5 species each followed by Caesalpiniaceae with 4 species. While the families like Fabaceae, Rubiaceae, Oleaceae, Arecaceae and Poaceae with 3 species each. All other families represented with single species each. In order to infer the dominant genera reveals that, among the total 50 genera represented, *Ficus* is the first dominant genus with 4 species followed by *Jasminum* with 3 species and *Terminalia* with 2 species. Similarly, the different life forms, which are present in the sacred groves are Trees (26 Nos.), Shrubs (12 Nos.), Climbers (6 Nos.) and Herbs (12 Nos.).

Similarly Jayapal *et al.*¹⁸ also studied on 'Muniandavar' sacred groves from Vaduvakudi at Thiruvaiyaru Taluk, Thanjavur district of Tamil Nadu. In the present study, they recorded about 180 plant species belonging to 158 genera and 75 plant families; the key stone species which are available in the Sacred groves includes *Anacardium occidentale*, *Borassus flabellifer*, *Ficus benghalensis* that harbors a number of birds and other survival of many other species. They also highlighted the religious importance of some selected sacred plants which are documented from the study area. Moreover, the presence of various dry evergreen plant species such as *Albizia amara*, *Atalantia monophylla*, *Lepizanthes tetraphylla*, *Madhuca longifolia*, *Memecylon umbellatum*, *Morinda pubescens*, *Pterospermum canescens* etc. were also recorded.

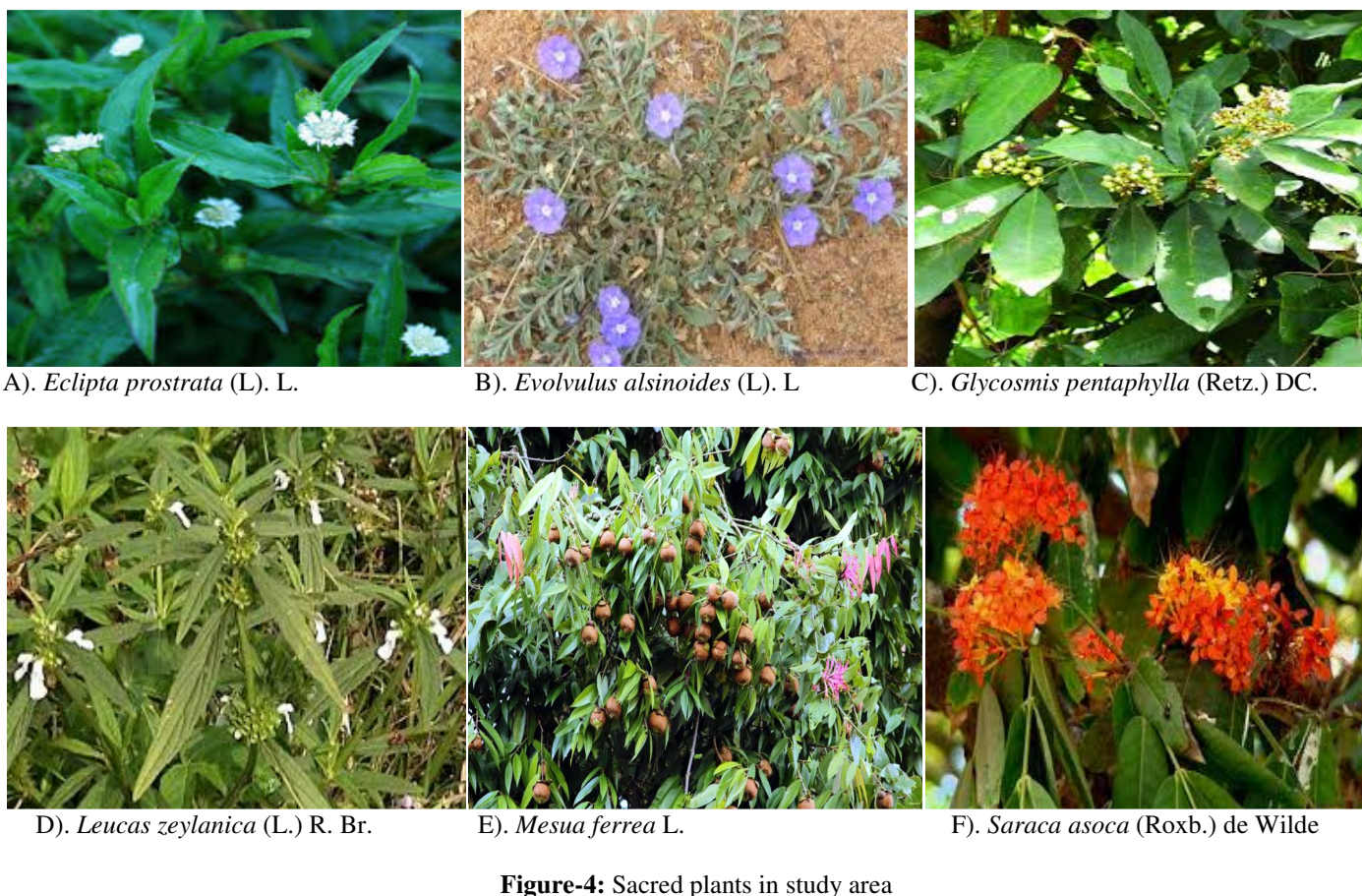
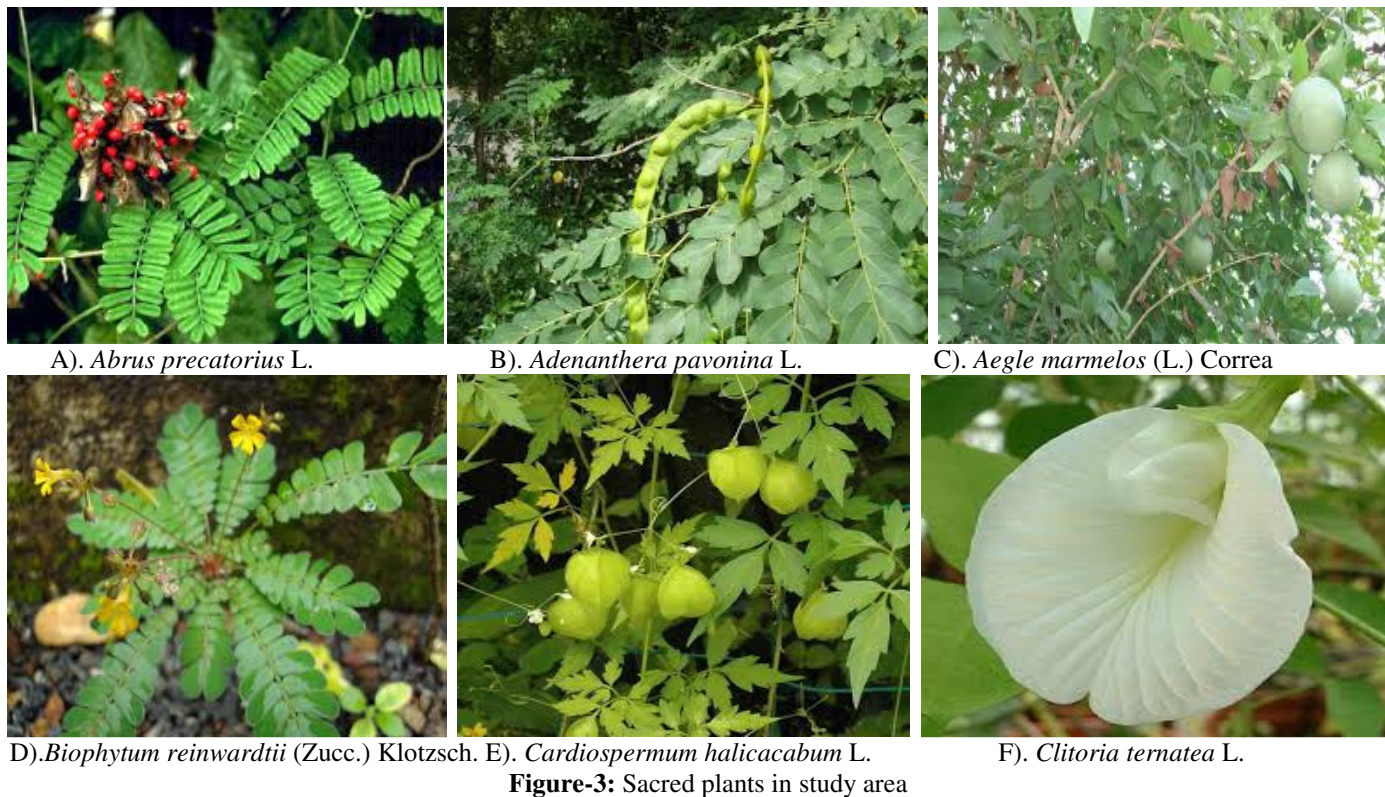


Table-1: List of religious important plants from the study area

Sl No.	Botanical Name	Common Name	Family	Religious Significance
1	<i>Abrus precatorius</i> L. (Figure-3A).	Kunnikkuru	Fabaceae	Seeds are used as offerings to Lord Krishna.
2	<i>Adenanthera pavonina</i> L. (Fig. 3B).	Manjadi	Fabaceae	It is believed as beloved of God Vishnu. The seed as placed in a pan in temples.
3	<i>Aegle marmelos</i> (L.) Correa (Fig.3C).	Koovalam	Rutaceae	The leaves of the plant is used in temples as a part of devotion to God Shiva.
4	<i>Aerva lanata</i> (L.) Juss. ex Schult.	Cherula	Amaranthaceae	One among the 'Dasapushpam' the ten sacred flowers of Kerala. The entire plants are placed in temples.
5	<i>Biophytum reinwardtii</i> (Zucc.) Klotzsch. (Fig.3D).	Mukkutti	Oxalidaceae	It is one among the 'Dasapushpam', the ten sacred flowers of Kerala. The entire plants or its flowers are placed in temples.
6	<i>Cardiospermum halicacabum</i> L. (Fig.3E).	Uzhinja	Sapindaceae	It used during the Thiruvathira at Dhanu month in Malayalam calender.
7	<i>Caryota urens</i> L.	Anapana	Arecaceae	Toddy obtained from the plant is used in some rituals in groves.
8	<i>Clerodendrum paniculatum</i> L.	Krishnakireedam	Verbanaceae	The attractive flowers of the plant are used for the worship of god as a part of hindu rituals.
9	<i>Clitoria ternatea</i> L. (Fig.3F).	Sangupushpam	Fabaceae	It is considered as sacred plant and planted by people in their houses for pooja purposes.
10	<i>Cynodon dactylon</i> (L.) Pers.	Karuka	Poaceae	One among the <i>Dasapushpam</i> , the ten sacred flowers of Kerala. It is used on the occasion of holy functions, festivals and marriages etc. Plant is also used at the time of child birth to convey the message to the parent of married woman. It also associated with Lord Ganesh.
11	<i>Eclipta prostrata</i> (L.) L. (Fig.4A).	Kanjunni or Kayyonni	Asteraceae	One among the 'Dasapushpam' the ten sacred flowers of Kerala. It is used during the Thiruvathira at Dhanu month in Malayalam calender.
12	<i>Evolvulus alsinoides</i> (L.) L. (Fig.4B).	Krishnakranti	Asteraceae	It is used during the Thiruvathira at Dhanu month in Malayalam calender.
13	<i>Glycosmis pentaphylla</i> (Retz.) DC. (Fig.4C).	Panal	Rutaceae	Leaves are used to keep for eliminating various evil believes.
14	<i>Ixora coccinea</i> L.	Techi	Rubiaceae	Flowers of the plant are used in temples for worship.
15	<i>Leucas zeylanica</i> (L.) R. Br. (Fig.4D).	Thumba	Lamiaceae	Flower is regarded as the most favourite flower of Mahabali, the most prompted king of Puranas. Thus, it is used to fill Onapoo flower is regarded as the most favourite flower of Mahabali, the most prompted king of Puranas. Thus, it is used to fill Onapookkalam.
16	<i>Mesua ferrea</i> L. (Fig.4E).	Nagamaram	Clusiaceae	Seed oil is used for lighting the temple.

17	<i>Ocimum tenuiflorum</i> L.	Thulasi	Lamiaceae	The plant is a part of hindu rituals and supposed to be beloved of Lord Krishna. It is worshiped and cultivated in the Hindus homes. People believed that if Tulsi is kept on the head of dying man he gets heaven. Brahmins consider the plant as a wife of Vishnu. But in Kerala, the Nairs thought to believe this plant associated with god Shiva.
18	<i>Santalum album</i> L.	Chandanam	Santalaceae	The paste from the wood of the plant is used in temples as a symbol of devotion.
19	<i>Saraca asoca</i> (Roxb.) de Wilde (Fig.4F).	Asokam	Caesalpiniaceae	Married women in India are known to eat Ashoka flower buds as a part of ritual.
20	<i>Vernonia cinerea</i> (L.) Less.	Poovamkurunthala	Asteraceae	Plant is used for some Pooja purposes. One among the 'Dasapushpam' the ten sacred flowers of Kerala.

Conclusion

The various studies on sacred groves of different regions reveal that, the rich species diversity in these groves indicates its importance to be considered as a conserved area. The gradual erosion of belief system and traditional culture of human societies leads to accelerated degradation of such conserved areas such as sacred groves. Major threats faced by these sacred groves are due to developmental activities, encroachment, urbanization and changing socio-economic values. Anthropogenic activities like collection of firewood, dumping of waste and other many anti-social elements are the major other threats to the gene pool of these fragile ecosystems. Moreover the invasion of weeds becomes another serious problem in the ecological functioning of the sacred grove and it may affect the existing biodiversity. Sacred grove forests viewed as traditional method of *insitu* conservation practice. Change in the human attitude towards the biodiversity is critical for the success of these conservation efforts. Thus nature worship has been a key force in determining human attitudes towards conservation and sustainable utilization of natural resources.

References

- Ramakrishnan P.S. (1998). Conserving the sacred for biodiversity: The conceptual framework. Conserving the sacred for biodiversity management, Central University, Pondicherry.
- Nayar M.P. (1997). Biodiversity challenges in Kerala and science of conservation biology. In: P. Pushpangadan and K.S.S. Nair (Eds.), *Biodiversity of tropical forests: the Kerala scenario*. The State Committee on Science, Technology and Environment (STEC), Govt. of Kerala, 7 – 23.
- Induchoodan N.C. (1996). Ecological studies on the sacred groves of Kerala. Ph.D. thesis, Dept. Ecology, Pondichery University, Pondichery.
- Whittaker R.H. (1970). *Communities and Ecosystems*. Macmillan Publishing Co., New York.
- Mohan C.N. and Nair N.C. (1981). *Kunstleria praini*- a new genus record of India and a new species in the genus. *Proc. Ind. Acad. Sci.*, 90(3), 207-209.
- Unnikrishnan E. (1995). Sacred Groves of North Kerala-An Ecofolklore Study (in Malayalam). *Jeevarekha*, Thrissur, Kerala.
- Bhagwat S.A., Kushalappa C.G., Williams P.H. and Brown N.D. (2005). The role of informal protected areas in maintaining biodiversity in the western Ghats of India. *Ecol Soc.*, 10(1), 1-40.
- Pushpangadan P., Rajendraprasad M. and Krishnan R.N. (1998). Sacred groves of Kerala: a synthesis of art of knowledge. In: Ramakrishnan, P.S., Saxena, K.G., Chandrashekar, U.M. (Eds.) *Conserving the sacred for Biodiversity Management*. Oxford and IBH Publishing Co., New Delhi. 193 - 210.
- Gadgil M. and Vartak V.D. (1975). Sacred groves of India: a plea for continued conservation. *J. Bomb. Nat. Hist. Soc.*, 72(2), 314-320.
- Israel E.I., Viji C. and Narasimhan D. (1997). Sacred groves: traditional ecological heritage. *Int. J. Eco. Env. Sci.*, 23(4), 463-470.
- Tiwari B.K., Barik S.K. and Tripathi R.S. (2011). Sacred groves of Meghalaya. In: Udayan, P.S., Harinarayanan, M.K., Tushar, K.V. and Indira, B. 2007. Some common plants used by *Kurichiar* tribes of Tirunelli forest, Wayanad district, Kerala medicine and other traditional users. *Ind. J. Trad. Know.*, 7, 250-255.
- Chandrashekar U.M. (2011). Conservation and management of sacred groves in Kerala. Project funded by the Biodiversity Cell, Department of Forests and Wildlife, Government of Kerala. KFRI, Peechi, Kerala.
- Hooker J.D. (2016). 1872-1897. *The Flora of British India*, I-VII. Reeve & Co., London.
- Gamble J.S. and Fischer C.E.C. (1915). *The Flora of the Presidency of Madras*. Adlard & Son Ltd., London.

15. Sasidharan N. (2004). Biodiversity documentation for Kerala. *Part-6: Flowering Plants*. Kerala Forest Research Institute, Peechi, Thrissur.
16. Santapau H. and Henry A.N. (1973). A Dictionary of the flowering plants in India. *Council of Scientific & Industrial Research*, New Delhi.
17. Nair H.R., Thomas B., Anish V.B., Antony V.T. and Varghese M.C. (2014). Religious important sacred plants from selected sacred groves of Kottayam District, Kerala, India. *Bot. Rep.*, 3, 1-10.
18. Jayapal J., Tangavelou A.C. and Panneerselvam A. (2014). Medicinal plants of PeriyakottaiPattaiyar sacred grove in Pattukottai Taluk at Thanjavur District, Tamilnadu, India. *Int. J. Pharm. Chem. Sci.*, 3(2), 399-410.