

UTILIZATION OF PLANTS IN TRADITIONAL ART FORMS OF KERALA - A SURVEY

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ABSTRACT

A list of 19 plants belonging to 14 families, used in traditional and ritualistic art forms of Kerala has been compiled. The survey is based on a field specimen collection and on information gathered following interviews with various people and traditional artists called 'Aashan'. The plants are listed giving the parts used and according to their uses in different aspects of these arts such as makeup, costumes, extracts of pigments, etc. The species like *Curcuma longa*, *Indigofera tinctoria*, *Terminalia chebula*, *Sesamum indicum* possess therapeutic properties besides natural dyeing, cosmetic production etc. and are being used in traditional health care practices.

Key words: *Cocos nucifera*, *Curcuma longa*, *Indigofera tinctoria*, Kalamezhuthu, Kathakali, Mural paintings, Natural Dyes, *Oryza sativa*, Plant extracts, Traditional art forms.

INTRODUCTION

The history of man and his discovery of art began around 6000 years ago where primitive man recorded his daily activities by etching on rock that was later called as pre-historic art, which caused the evolution of cave paintings made using blood, leaf, herb, charcoal and such impromptu materials. As man became more civilized, he used advanced techniques and discovered early form of art forms like they changed from rock paintings to wall paintings (mural paintings). The word

“mural” is derived from the latin word “murus” meaning “wall”. Murals refer to paintings embellished on visual components like the wall, ceiling, or other huge lasting surfaces. Ajantha cave paintings (200 BC) are an example, where mostly mineral based pigments were used on a lime plastered wall on cut rock surfaces (Ghosh, 1967). Earliest murals can be found at Badami (Karnataka), Sittannaval Jain cave temple (Tamil Nadu) and so on. In all views, with all ethics there is an interrelationship between man and nature (Lee, 1980). From ancient times itself plants and its items are extensively used in various art forms for diverse purposes.

India is a country rich in tradition of culture with unique and diverse cultural landscape such as sacred grooves, forests, rivers, mountains and water bodies (Laladhas, Preetha, & Oommen). Kerala is a land with rich biodiversity and geotopographical zonation. It can be reflected in the various forms of ritualistic art forms as well as performing arts that prevail even now a days in Kerala.

Learning about traditional and native art works can serve to pass on ecological knowledge while also contextualizing influence of other factors on traditional and contemporary art forms (Bequette, 2007; Gradle, 2015). Art forms plays a vital role in the sustenance and preservation of local

knowledge through its various components. The interrelationship of humans with nature has been described from several traditional societies and landscapes all over the world (Booih & Ramakrishnan, 1983)

MATERIALS AND METHODS

The field survey documented in this study was performed by interviewing artists, *Kathakaliaashan*, *Kalamezhuthuaashan* and artists of respective fields during a period of one year and was conducted throughout different institutions and temples of Kerala. The taxonomic identity of each plant was confirmed and the nomenclature of the plants was updated by latest literature whenever it was possible. Plants are given below by their common name, botanical name, family name, followed by colouring component and parts used in different aspects of traditional art forms. The next mentioned information is the medicinal uses of the plants, parts used, and the claimed therapeutic action.

RESULTS AND DISCUSSION

Nineteen plant species from various families were enlisted as a result of the survey. Among these plants, *Indigofera tinctoria*, *Cocos nucifera*, and *Curcuma longa* are using in all the three traditional art forms whereas *Oryza sativa* is using in both Kadhakali and Kalamezhuthu. A list of commonly used plants is given in the table with scientific name, family, part used and colouring components.

1. *Albizia lebbbeck*

Family: Fabaceae

Binomial: *Albizialebbbeck*(L.)Benth.

Medicinal uses: it is a good astringent. It is used to treat boils, coughs, ophthalmic disorders, flu, gingivitis and lung disorders. Prominently used in folk, siddha, ayurveda, and homoeopathic medicines. (karuppanan, Deepika, & Venugopal, 2013)

2. *Solanum torvum*

Family: Solanaceae

Binomial: *Solanumtorvum* Sw.

Medicinal uses: The leaf extracts show some antibacterial property, wound healing agent, analgesic of tooth ache, anti-helminthic activity, anti plasmodial activity, anti cancer. It is used in the treatment of asthma, dropsy, chest pain, chronic fever, difficult urination and worm infestation

3. *Indigofera tinctoria*

Family: Fabaceae

Binomial: *Indigoferatinctoria* L.

Medicinal uses: It used against human ailments such as Epilepsy, Nervous disorders, Asthma, Bronchitis, Fever, Stomach ailments, Liver, Kidney and spleen disorders, for Rabies prophylaxis, Skin diseases. It is also used against worm infections, Lice problem, against snakebites and to treat insect and scorpion stings etc. (Carmine, Paolo, & Bruno, 2000)

List of plants used in traditional art forms of Kerala

Kadhakali <i>Indigofera tinctoria</i> <i>Cocos nucifera</i> <i>Curcuma longa</i> <i>Gmelina arborea</i> <i>Solanum torvum</i> <i>Oryza sativa</i> <i>Terminalia arjuna</i> <i>Seasamum indicum</i> <i>Corchorus capsularis</i>	Kalamezhuthu <i>Indigofera tinctoria</i> <i>Cocos nucifer</i> <i>Curcuma longa</i> <i>Albizia lebbeck</i> <i>Terminalia chebula</i> <i>Oryza sativa</i>	Traditional Kerala style mural painting <i>Indigofera tinctoria</i> <i>Cocos nucifer</i> <i>Curcuma longa</i> <i>Aristida setacea</i> <i>Phyllanthus eblica</i> <i>Gossypium herbaceum</i> <i>Garcinia morella</i> <i>Biophytum sps</i> <i>Bambusa Sps</i> <i>Seasamum indicum</i> <i>Areca catechu</i>
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Table 1: List of plants used in traditional art forms of Kerala

Sl no	Common name	Scientific name	Family	Colouring component	Part used
1	Neelamari	<i>Indigofera tinctoria</i>	Fabaceae	Indigotin	Whole plant
2	Coconut	<i>Cocos nucifera</i>	palmaea	-----	Whole plant
3	Manjal	<i>Curcuma long</i>	Zingiberaceae	Curcumin, curcuminoid	Root
4	Kumizhumaram	<i>Gmelina arborea</i>	Lamiaceae	-----	wood
5	Puthirichunda	<i>Solanum torvum</i>	Solanaceae	-----	Flower ovary
6	Nellu	<i>Oryza sativa</i>	Poaceae	-----	Rice bran, seed
7	Ellu	<i>Seasamum indicum</i>	Pedaliaceae	-----	Seed, seed oil
8	Jute	<i>Corchorus capsularis</i>	Malvaceae	-----	Fibre
9	Vaaka/poovaaka	<i>Albizzia lebeck</i>	Fabaceae	-----	Leaf
10	Maruth	<i>Terminalia chebula</i>	Combretaceae	Chebulinic acid	Gum, wax
11	Iyyampullu	<i>Aristida setacea</i>	Poaceae	-----	Inflorescence
12	Nelli	<i>Phyllanthus emblica</i>	phyllanthaceae	-----	Gum, resin
13	Cotton/paruthi	<i>Gossypium herbaceum</i>	Malvaceae	-----	Mature fruit
14	Kadukka	<i>Terminalia arjuna</i>	Combretaceae	Arjunic acid	Resin
15	Iravimaram	<i>Garcinia Morella</i>	clusiaceae	moreollinn	Gum, resin
16	Mukkutty	<i>Biophytumsp</i>	Oxalidiacea	-----	Whole plant
17	Bamboo/mula	<i>Bambusasps</i>	Poaceae	-----	Stem, internode
18	Adakka/kavungu	<i>Areca catechu</i>	Palmaceae	-----	Wood
19	Poonilavam/ilavam	<i>Ceiba pentandra</i>	Malvaceae	-----	Gum, resin/wax

Table 2: Common name, binomial, family and useful part of the plants

1. *Curcuma longa*

Family: Zingiberaceae

Binomial: *Curcuma longa* L.

Traditional medicinal uses: It is taken as the blood purifier and is very useful in the common cold, leprosy, intermittent, affections of the liver, dropsy, inflammation and wound healing. The rhizome of turmeric plant is highly aromatic and antiseptic. Sweetened milk boiled with the turmeric is the popular remedy for cold and cough. It is given in liver ailments and jaundice. (Ammon & Wahl, 1991)

Dye: It is used for dying paper, silk wool etc. The powdered rhizome of this plant is used as a condiment and as an yellow dye.

2. *Gmelina arborea*

Family: Verbanaceae

Binomial: *Gmelina arborea* Roxb.

Medicine: It promotes digestive fire and is a purgative. It manages vertigo, It is also good for hair and rejuvenating, inflammation, vata disorders, pain, piles, fever, heat and toxins. It is aphrodisiac in nature.

6. *Cocos nucifera*

Family: Arecaceae

Binomial: *Cocos nucifera* L.

Food: Oil obtained from coconut is used as cooking oil and is having high nutritional value. Desiccated coconut used in making of curries, bakery item and for making coconut milk. Palm wine or 'Lamhanok' is made from coconut. Fermented sap is used as an alcoholic beverage called 'Toddy' (Manisha & Shyamapada, 2011)

7. *Corchorus capsularis*

Family: Malvaceae

Binomial: *Corchorus capsularis* L.

Medicinal uses: The leaves are used to treat appetite, digestion as a laxative stimulant. The infusion leaves reduce fever. The root and leaves used in dysentery.

8. *Terminalia chebula*

Family: Combretaceae

Binomial: *Terminalia chebula* L.

Medicinal uses: Triphala which is used in many ayurvedic formulations, rich in tannins. Dried fruit powder used as medicine. (RN & Sudhamoy, 1929) The ethanolic extract of its fruits provide cardio protective effect..

9. *Aristida setacea*

Family: Poaceae

Binomial: *Aristida setacea* Trin.

Fiber: Used for making painting brushes and also used to make brooms in some areas.

10. *Oryza sativa*

Family: Poaceae

Binomial: *Oryza sativa* L.

Food: Rice is one of the major staple grains of the world. Asian and South East Asian cuisine is majorly dependent on rice. (Vaughan, H, & K, 2003)

11. *Terminalia arjuna*

Family: Combretaceae

Binomial : *Terminalia arjuna* (Roxb.) Whight & Arn.

Traditional medicinal uses: In ayurveda text ashtangahrudaya, written by Vagbhatacharya, *Terminalia arjuna* is mentioned as a topical applicator against wounds, hemorrhages and ulcers. (RN & Sudhamoy, 1929)

12. *Seasamum indicum*

Family: Pedaliaceae

Binomial: *Seasamum indicum* L.

Medicine: The leaves and trees are astringent used in the treatment of infant cholera, diarrhea, dysentery and bladder troubles. (Nayar & Mehar, 1970). Seeds are diuretic, tonic for kidneys and liver. Treatment of hair loss, dry cough, stiff joint, etc.

13. *Phyllanthus emblica*

Family: Phyllanthaceae

Binomial: *Phyllanthus emblica* L.

Medicinal uses: It is used in ayurvedic medicines. The fruits, which are of both dietary and medicinal use, are shown to possess myriad medicinal benefits and to possess anti-aging effects. It possesses properties that can combat age-related illness such as cancer, diabetes, cardiac ailments, renal failure, immune suppression, arthritis, cataracts, and wrinkling of skin.

14. *Gossypium herbaceum*

Family: Malvaceae

Binomial: *Gossypium herbaceum* L.

Medicinal: Cotton seed is used as pain reliever, as a nervine tonic in treating of head ache and migraine, the decoction of the seeds were given in intermittent fever. Seeds were also used in epilepsy and as an antidote to snake poison. The juice of the leaves and the decoctions of the seed were used in dysentery. Leaves, root and seeds of *Gossypium herbaceum* were used to augment labour, in retention of placenta and as emmenagogues.

15. *Garcinia morella*

Family: Clusiaceae

Binomial: *Garcinia Morella* (Gaertn.) Desr.

Medicine: Dried up fruit slices are valued as a traditional remedy for dysentery. In ayurvedha the fruits are used in dysentery, gastritis etc. and is said to have anti-inflammatory properties. When the bark is cut it exudes yellow resin called Gamboge, that is used in food, medicines and paints.

16. *Biophytum sensitivum*

Family: Oxalidaceae

Binomial:

Biophytum sensitivum (L.) DC.

Medicinal uses: It is medicinally used in traditionally Ayurvedic and Siddha system. It is one of the auspicious herb that constitute the group "Dashapushpam" an Ayurvedic formulations. Ayurveda recommends its powder in gonorrheal infection and lithiasis and the decoction is advised for amenorrhea and dysmenorrhea. In siddha system, the grounded leaves are given along with butter milk for diarrhea, grounded seeds are applied over wound and ulcer, the samoolam of this plant is mixed with honey and are given for cough and chest congestion.

17. *Bambusa vulgaris*

Family: Poaceae

Binomial: *Bambusa vulgaris* Schrad. ex J.C. Wendl.

Medicinal: Black shoots of the bamboo is used against kidney and spleen disorders. Roots and shoots of the plant are used in treating venereal diseases and even cancer.

18. *Areca catechu*

Family: Arecaceae

Binomial: *Areca catechu* L.

Medicinal: Powdered areca nut is used as a constituent in some dentifrices, the drug of it used as a decoction. Betal palm is an astringent, stimulant herb that relieves hunger, abdominal discomfort and weariness. It kills intestinal parasites and other pathogens.

CONCLUSION

In traditional art forms such as *askalamezhuth*, *mural painting* and *kadhakali*, there are nineteen locally available plant products are used. Four of these plants shows dyeing properties. Some others are source of food, medicinal property, textile industry, cosmetics etc. These plants were used in the arts because of their technical suitability, easy availability and their medicinal property.

Ø The dyeing property of these plants is used for colouring purposes.

Ø Local availability and technical suitability is the factor for selecting these plants in these art forms.

Ø The medicinal properties of these plants make them harmless raw materials in the makeup of art such as *kadhakali*.

Ø The major plants used are *Indigofera tinctoria*, *Curcuma longa*, *Cocos nucifera*, and *Gossypium herbaceum*.

Ø *Indigotin*, *Curcumin*, *curcuminoid*, *Chebulinic acid*, *Arjunic acid*, and *moreollinn* were reported as the major colouring compounds extracted from the reported plants.

India has rich biodiversity providing us with enough raw materials which are least explored.

(Ghokale, AU, RA, & SR, 2004). Natural dyes are nowadays in demand not only in the textile industry but in cosmetics, leather, food and in pharmaceuticals. Therefore, it is essential to explore and proper documentation of this traditional knowledge. The plant yield, dye concentration can be improved by biotechnological methods.

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