



## Indigenous Aromatic and Spice Plants Described in Van Rheed's Hortus Indici Malabarici

### KEYWORDS

Aromatic, Hortus Malabaricus, spices, Van Rheedee.

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**ABSTRACT** *Hortus indici Malabarici* is the first scientific monograph on the plant wealth of the tropical Asia, published from Amsterdam by Hendrich Adrean Van Rheed during the period of A.D 1678 – 1693. It not only gives an account of the medicinal wealth of the ancient Malabar Coast, but also reflects the political, sociological and historical accounts of the Kerala. In this 12 voluminous work 781 plants species illustrated with descriptions. Of these, 49 medicinal plants are either aromatic plants or spices. The present work based on the available information of these plants collected from various sources. Regeneration and fortification of these indigenous species in nature is the need of the hour to reinstate our biological heritage.

### Introduction

India is well known as the land of spices from the ancient period onwards. The oldest literary record about spices in India found in the Rig Veda and other three Vedas dating back to 6000 BC. We find the use of black piper in Yajur Veda and turmeric in Atharva Veda. Similarly the use of spice in the epic Ramayana. Excavations done in the Indus Valley revealed that spices were used even before 1000 BC. There are historical evidences to show that Indian spices such as pepper, cinnamon and ginger were exported to ancient Greeks and Arab countries. There are innumerable citations about the wealth of spices in India are given in the writings of the pilgrimage travelers like Hiuen Tsang (629AD), Masudi of Baghdad (890-956 AD). As rightly observed by Marco Paulo (1298 AD) good ginger grew in Malabar was described under the trade name, "Quilon Ginger". The writings of Abber Razad (1442 AD) mentioned about vessels of pepper that sailed from Calicut to Meccas Laden. The European countries particularly, Spain, UK and Portugal showed keen interest in the trade of spices of India during fifteenth century. In 1487, Pero da Covilha reached Malabar Coast of Calicut from Portugal via Arabia and was amazed in the qualities/prospects of pepper and ginger. The Covilha turned to Cairo in 1490 and sent a report to King John of Portugal about the trade prospects of spices from Kerala Coast. Consequently, King sent Vasco-de- Gama with four vessels to find a sea route to India. Gamma anchored the Calicut port in May 1498 with the aim of establishing a trade contract with Kerala. By 1511 AD, the Portuguese had gained control of the Malabar Coast of India (Malhothra, 2000). Later, between 1605 and 1621 Dutch drove the Portuguese out of the spice island and obtained a monopoly of trade in spices. Hendrich Adrian Van Rheedee(1636-1691), the Dutch admiral of Malabar realizing Malabar as the land of spices and medicinal plants and took interest to collect and document the plant wealth of Malabar. With the help of indigenous ayurvedic physicians namely Itti Achuthen, Appu Bhat, Ranga Bhat, Vinayaka Panditt and a group of workers he documented the floristic wealth of Malabar Coast. He published his work in 12 volumes during 1678-1693. In this 12 volume work, 781 plants species were illustrated with plates, habit, habitat, medicinal and other uses. A closer analysis of the work revealed that, there are 49 medicinal plants having potential as an aromatic plants or spices possessing odorless volatile substances, which occur as essential oil, gum exudates, balsam and oleoresin in one or more parts, namely, root, wood, bark, stem, foliage, flower and fruit. An attempt is also made to collect all the relevant information of these medicinal plants like, correct author citation, synonyms, habit and habitat, geographical distribution, conservation status, indigenous uses and their chemical

constituents.

### Methodology

Data were gathered from the literatures (Rheedee, 1678-1703), (Fournier, 1980), (Kumar, 1970), (Drury, 1985), (Desai, 1998), and (Manilal, 2003). Field exploration studies conducted during 2008-2009 and the specimens were collected, photographed, and subjected to morpho-taxonomic studies. The voucher specimens were prepared and counter checked with the herbarium of Kerala Forest Research Institute.

### Results and conclusion

As revealed in the present investigation, 49 species described in Hortus Malabaricus can be included under aromatic and spice category of medicinal plants. The multi-faceted aspects of these medicinal plants are given below.

1. ***Premna serratifolia* L.**, Family- Verbanaceae. Synn-*Premna integrifolia* L., *Premna obtusifolia* R. Br. Comn.(E)- Headache tree. Comn.(M)- Appal, Munja. Habit- Shrub to small tree. Habitat- Moist sandy soil and scrub jungles along seacoasts and mangrove forests. Distribution in Kerala- Northern and Central Kerala. Useful parts- whole plant. Uses- Against cold, fever, headache, rheumatism, neuralgia, circulatory problems and dysentery. Chemical constituents- Caryophyllene, flavanoides and hydroquinone.
2. ***Cinnamomum verum* Presl.** Family- Lauraceae. Synn-*Cinnamomum zeylanicum* Blume.. Comn.(E)- Cinnamon, Cinnamomum. Comn.(M)- Karuva, Elavangam, Vayana. Habit- Tree. Habitat- Evergreen and riparian forests, also cultivated. Distribution in Kerala- All Districts. Useful parts-Root, bark and flowers. Uses- Against cough, rheumatism, asthma, circulatory problems and dysentery. Chemical constituents- Cinnamic acid, cinnamaldehydes, cinnamyl isovalrate, cinnamyl phenols.
3. ***Glycosmis pentaphylla* (Retz.) DC.** Family- Rutaceae. Synn- *Limonia pentaphylla* Retz., *Glycosmis arborea* (Roxb.)DC., *Glycosmis cochinchinensis* Gamble. Comn(M)- Kuttippannel, Pannel. Habit- Shrub. Habitat- Semi-evergreen and moist deciduous forests, also in plains. Distribution in Kerala- All Districts. Useful parts- Root and leaves, Uses- in rheumatism, dental problems and gas troubles.
4. ***Vitex trifolia* L.** Family- Verbanaceae. Synn- *Vitex trifolia* L. var. *simplicifolia* Cham., *Vitex agnus-castus* var. *subtrisepta* O. Ktze. Comn.(E)- Arabian Lilac. Comn.(M)- Nochi. Habit- Tree, Habitat- Coastal areas and plains. Distribution in Kerala- Northern Kerala. Useful parts-Root, bark and flowers, Uses- Against fever and digestive problems. Chemical constituents- Caryophyllene, flavanoides and

- hydroquinone.
5. ***Vitex negundo* L.** Family- Verbanaceae. Synn- *Vitex trifolia* Graham., *Vitex negundo* L. var. *purpurascens* Sivar. & Moldenke. Comn(E)- Chaste tree. Comn.(M)- Karinochi. Habit- Shrub to small tree, Habitat- Grown as hedge plant, also growing wild. Distribution in Kerala- All Districts. Useful parts-Root, bark and flowers, Uses- Against fever, circulatory and digestive problems. Chemical constituents- Caryophyllene, flavanoides and hydroquinone.
  6. ***Capsicum annum* L.** Family- Solanaceae. Synn- *Capsicum purpureum* Roxb., *Capsicum frutescens* Clarke. *Capsicum bicolour* Jacq. Comn(E)- Chilly, Red or Sweet peppers. Comn.(M)- Mulaku, Pachamulaku. Habit- Herb. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Fruit. Uses- Commercial crop as vegetable, spice and condiments, medicinally against dental problems. Chemical constituents- Capsaicin, ascorbic acid, oleoresin and capsanthin.
  7. ***Mangifera indica* L.** Family- Anacardiaceae. Comn(E)- Mango tree. Comn.(M)- Mavu. Habit- Tree. Habitat- Evergreen and semi-evergreen forests and also widely cultivated. Distribution in Kerala- All Districts. Useful parts- fruit and leaves. Uses- Vegetable, dental care. Chemical constituents- Ascorbic acid, oleoresin and hydroquinone.
  8. ***Myristica malabarica* Lam.** Family- Myristicaceae. Comn(E)- Malabar nutmeg. Comn.(M)- Chorapali. Habit- Tree. Habitat- Evergreen and swamp forests. Distribution in Kerala- Vulnerable, all Districts. Useful parts- Fruit, seed. Uses- Commercial crop as spice and condiments, medicinally against dental problems, vomiting, fever. Chemical constituents- Myristicin. Phenols, flavnoides.
  9. ***Atalantia monophylla* (L.) DC.** Family- Rutaceae. Synn- *Limonia monophylla* L., *Malnaregam malabarica* Rafin., *Atalantia floribunda* Wight. Comn.(M)- Katunarenga. Habit- Shrub to small tree. Habitat- Dry deciduous forests. Distribution in Kerala- Palakad, Iduki and Alapuzha. Useful parts-Whole plant. Uses- Headache, cough and in dithering. Chemical constituents- Citrullin, citric acid, and aldehydes.
  10. ***Naringi crenulata* (Roxb.) Nicolson.** Family- Rutaceae. Synn- *Hesperethusa crenulata* (Roxb.) Roem., *Limonia acidissima* sensu Hook.f. Comn.(M)- Kattunarakam, Malanarakam. Habit- Tree. Habitat- Semi-evergreen and moist deciduous forests, also in the plains. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Epilepsy, fever. Chemical constituents- citric acid and aldehydes.
  11. ***Murraya koenigii* (L.) Spreng.** Family- Rutaceae. Synn- *Bergera koenigii* L., *Chalcas koenigii* (L.) Kurz. Comn(E)- Curry leaf tree, Comn.(M)- Kariwepu. Habit- Shrub to small tree, Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-leaves. Uses- vegetable and against fever. Chemicals- Flavanoides and oleoresin.
  12. ***Vitex altissima* L. f.** Family- Verbanaceae. Synn- *Vitex alata* Willd., Comn.(M)- Mylellu. Habit- Tree, Habitat- Moist deciduous and semi-evergreen forests. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Rheumatism and respiratory problems Chemicals- Caryophyllene, flavanoides and hydroquinone.
  13. ***Vitex pinnata* L.** Family- Verbanaceae. Synn- *Vitex pubescens* Vahl., *Vitex arborea* Roxb., Comn.(M)- Kattumayilellu. Habit- Tree, Habitat- Moist deciduous and semi-evergreen forests. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Dysentery, snake bite. Chemicals- Caryophyllene, flavanoides and hydroquinone.
  14. ***Acronychia pedunculata* (L.) Miq.** Family- Rutaceae. Synn- *Jambolifera pedunculata* L., *Acronychia barberi* Gamble., *Acronychia laurifolia* Blume. Comn.(M)- Mavuringi. Habit- Tree. Habitat- Semi-evergreen forests, also in the plains. Distribution in Kerala- All Districts. Useful parts-Leaves and barks. Uses- Skin diseases and pains. Chemical constituents- Hydroquinone and flavanoides.
  15. ***Litsea quinqueflora* (Dennst.) Suresh.** Family- Lauraceae. Synn- *Darwinia quinqueflora* Dennst., *Tetranthe* *ra ligustrina* Nees. *Actinodaphne quinqueflora* Dennst. Comn.(M)- Malampunna. Habit- Tree. Habitat- Evergreen forests. Distribution in Kerala- Endemic to southern Western Ghats.
  16. ***Zanthoxylum rhetsa* (Roxb.) DC.** Family- Rutaceae. Synn- *Fagara rhetsa* Roxb., *Fagara budrunga* Roxb., *Zanthoxylum budrunga* (Roxb.) DC. Comn(E)- Indian prickly ash. Comn.(M)- Mullilam. Habit- Tree. Habitat- Evergreen and moist deciduous forests, also in the plains. Distribution in Kerala- All Districts. Useful parts-Fruit. Uses- Pickles preparation, digestion. Chemical constituents- Oleoresin and flavanoides.
  17. ***Clerodendrum inerme* (L.) Gaertn.** Family- Verbenaceae. Synn- *Volkameria inermis* L., *Clerodendrum neriifolium* Wall. ex Schauer. Comn(E)- Seaside clerodendrum. Comn. (M)- Nirnochi. Habit- Shrub. Habitat- Scrub jungles along the banks of backwaters. Distribution in Kerala- Coastal area. Useful parts-whole plant. Uses- Insecticide, Rheumatism. Chemical constituents- Caryophyllene, flavanoides and hydroquinone.
  18. ***Cinnamomum malabratum* (Burm. f.) Blume.** Family- Lauraceae. Synn- *Laurus malabratum* Burm. f., *Cinnamomum iners* sensu Gamble. Comn.(M)- Vazhana. Habit- Tree. Habitat- Evergreen and semi-evergreen forests, also in the plains. Distribution in Kerala- Southern Western Ghats. Useful parts- leaves, fruit. Uses- Food preparation, digestion and joint pains. Chemical constituents- Cinnamaldehyde and oleoresin
  19. ***Psilanthus travancorensis* (Wight & Arn.) Leroy.** Family- Rubiaceae. Synn- *Coffea travancorensis* Wight & Arn., Comn.(M)- Pushkkaramulla. Habit- Shrub. Habitat- Sacred groves and plains. Distribution in Kerala- All Districts. Useful parts-Root. Uses- Decoction. Chemical constituents- Oleoresins, gums and hydroquinone.
  20. ***Jasminum sambac* (L.) Ait.** Family- Oleaceae. Synn- *Nyctanthes sambac* L., Comn(E)- Arabian jasmine. Comn. (M)- Kudamulla. Habit- Climber. Habitat- Garden plant. Distribution in Kerala- All Districts. Useful parts-Flowers. Uses- Commercial crop for flowers, eye diseases. Chemical constituents- Jasminol, jasminoic acid, oleoresins.
  21. ***Jasminum grandiflorum* L.** Family- Oleaceae. Comn(E)- Common jasmine. Comn.(M)- Pichakamulla. Habit- Climber. Habitat- Cultivated, often found as escape. Distribution in Kerala- All Districts. Useful parts-Flowers. Uses- Commercial crop for flowers, eye diseases. Chemical constituents- Jasminol, oleoresins, gums.
  22. ***Jasminum angustifolium* (L.) Willd.** Family- Oleaceae. Synn- *Nyctanthes angustifolia* L. Comn(E)- Wild jasmine. Comn.(M)- Kattumulla. Habit- Climber. Habitat- Garden plant. Distribution in Kerala- All Districts. Useful parts-Flowers. Uses- Eye diseases. Chemical constituents- Jasminol, oleoresins, gums.
  23. ***Jasminum multiflorum* (Burm. f.) Andr.** Family- Oleaceae. Synn- *Nyctanthes multiflora* Burm., *Jasminum pubescens* Willd., *Jasminum bracteatum* sensu Wight Comn(E)- Wild jasmine. Comn.(M)- Kasthurimulla. Habit- Climber. Habitat- Semi-evergreen and moist deciduous forests, also in the plains. Distribution in Kerala- All Districts. Useful parts-Flowers. Uses- Eye diseases and snake bite. Chemical constituents- Jasminol, oleoresins, gums.
  24. ***Piper nigrum* L.** Family- Piperaceae. Comn(E)- Black pepper. Comn.(M)- Kurumulaku. Habit- Climber. Habitat- Evergreen and semi-evergreen forests, also cultivated. Distribution in Kerala- All Districts. Useful parts-Whole plant Uses- Commercial crop as spice, condiments, medicinally against dental problems. fever, cough and snake bite. Chemical constituents- Piperine, chavicine, oleoresins gums and tannins.
  25. ***Piper longum* L.** Family- Piperaceae. Synn- *Chavica roxburghii* Miq. Comn(E)- Long pepper. Comn.(M)- Thippali. Habit- Climber. Habitat- Semi-evergreen, evergreen and moist deciduous forests and wastelands. Distribution in Kerala- All Districts. Useful parts-Whole plant Uses- Commercial crop as spice, condiments, medicinally against dental problems. fever, cough and snake bite. Chemical

- constituents- Piperine, oleoresins gums and tannins.
26. **Piper betle L.** Family- Piperaceae. Comn(E)- Betel leaf vine. Comn(M)- Vettillakkodi Habit- Climber. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Leaf. Uses- Stimulant. Chemical constituents- Piperine, oleoresins gums and tannins.
  27. **Piper argyrophyllum Miq.** Family- Piperaceae. Comn. (M)- Kattukurumulaku. Habit- Climber. Habitat- Semi-evergreen and evergreen forests. Distribution in Kerala- All Districts. Useful parts- Leaf, fruit Uses- Stimulant, spice. Chemical constituents- Piperine, oleoresins gums and tannins.
  28. **Platostoma hispidum (L.) Paton.** Family- Lamiaceae. Synn- *Gomphrena hispida L.*, *Acrocephalus hispidus (L.) Nicolson & Sivad.* *Prunella indica* Burm.f., *Ocimum capitatum* Roth. Habit- Herb. Habitat- Grassy areas in moist deciduous forests and waste lands. Distribution in Kerala- All Districts.
  29. **Plectranthus amboinicus (Lour.) Spreng.** Family- Lamiaceae. Synn- *Coleus amboinicus* Lour., *Coleus aromaticus* Benth.. Comn(E)- Indian borage. Comn.(M)- Panikoorka. Habit- Herb. Habitat- Grown in homesteads. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Skin disorders, fever, headache, dysentery. Chemical constituents- Phenols, oleoresin, coumarins.
  30. **Limnophila indica (L.) Druce.** Family- Scrophulariaceae. Synn- *Hottonia indica L.*, *Limnophila gratiolooides R. Br.* Comn.(M)- Manganari. Habit- Herb. Habitat- Along banks of streams and marshy areas. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Skin disorders, fever, headache. Chemical constituents- Phenols, oleoresins.
  31. **Plectranthus mollis (Ait.) Spreng.** Family- Lamiaceae. Synn- *Ocimum molle* Ait., *Plectranthus incanus* Link. Habit- Herb. Habitat- In the plains, mostly in moist localities. Distribution in Kerala- Southern Kerala. Useful parts- Whole plant.
  32. **Ocimum tenuiflorum L.** Family- Lamiaceae. Synn- *Ocimum sanctum* L. Comn(E)- Sacred basil. Comn.(M)- Thulasi. Habit- Shrub. Habitat- Grown as a sacred plant, elsewhere as an escape. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Skin disorders, Eye diseases, fever, headache, dysentery. Chemical constituents- Phenols, oleoresin, ocimic acid.
  33. **Ocimum tenuiflorum L.** Family- Lamiaceae. Synn- *Ocimum sanctum* L. Comn(E)- Sacred basil. Comn.(M)- Thulasi. Habit- Shrub. Habitat- Grown as a sacred plant, elsewhere as an escape. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Skin disorders, Eye diseases, fever, headache, dysentery. Chemical constituents- Phenols, oleoresin, ocimic acid.
  34. **Ocimum gratissimum L.** Family- Lamiaceae. Comn(E)- Lemon basil. Comn.(M)- Karpoorathulasi. Habit- Shrub. Habitat- Moist and dry deciduous forests, also in the plains. Distribution in Kerala- All Districts. Useful parts- Whole plant. Uses- Skin disorders, fever, headache. Chemical constituents- ocimic acid.
  35. **Ocimum basilicum L.** Family- Lamiaceae. Synn- *Ocimum basilicum* var. *purpurascens* Benth. Comn(E)- Sweet basil. Comn.(M)- Ramathulasi. Habit- Shrub. Habitat- Dry deciduous forests, also in the plains; often cultivated. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses- Skin disorders, Eye diseases, fever, headache, dysentery. Chemical constituents- Phenols, oleoresin, ocimic acid.
  36. **Anisomeles indica (L.) O. Ktze.** Family- Lamiaceae. Synn- *Nepeta indica L.*, *Anisomeles ovata R. Br.*, *Anisomeles heyneana* Benth. Comn.(M)- Karithumba. Habit- Herb. Habitat- Dry and moist deciduous forests and wastelands. Distribution in Kerala- All Kerala. Useful parts- All Districts. Uses-fever, headache. Chemical constituents- Phenols, oleoresin, gums.
  37. **Anisochilus carnosa (L. f.) Wall. ex Benth.** Family- Lamiaceae. Synn- *Lavandula carnosa* L. f.,. Comn(E)- Comn(E)- Sweet basil. Comn.(M)- Kattukoorkka. Habit- Herb. Habitat- In rocky areas among grasses and sedges. Distribution in Kerala- All Districts. Useful parts-Whole plant. Uses-fever, headache.
  38. **Leucas aspera (Willd.) Link.** Family- Lamiaceae. Synn- *Phlomis aspera* Willd. Comn.(M)- Thumba. Habit- Shrub. Habitat- Deciduous forests and wastelands. Often cultivated. Distribution in Kerala- All Districts. Useful parts- Whole plant. Uses- Skin disorders, Eye diseases, fever, headache, dysentery. Chemical constituents- Phenols, oleoresin.gums.
  39. **Eleteria cardamomum (L.) Maton.** Family- Zingiberaceae. Synn- *Amomum cardamomum L.*, *Alpinia cardamomum (L.) Roxb.*, Comn(E)- Cardamom. Comn.(M)- Elam. Habit- Herb. Habitat- Cultivated. Distribution in Kerala- Hilly regions. Useful parts-Fruit. Uses- Commercial crop as spice, condiments, medicinally against dental problems. fever, cough. Chemical constituents- Ziongeron, coumaric acid and phenols.
  40. **Curcuma zedoaria (Christm.) Rosc.** Family- Zingiberaceae. Synn- *Amomum zedoaria* Christm., *Curcuma zerumbet* Roxb., Comn(E)- Zedoary. Comn.(M)- Kasthurimanjal. Habit- Herb. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Rhizome. Uses- Commercial crop as minor spice, condiments, medicinally against skin problems fever. Chemical constituents- Ziongeron, Curcumin and phenols.
  41. **Costus speciosus (Koenig) J.E. Smith.** Family- Zingiberaceae. Synn- *Banksea speciosa* Koenig. Comn(E)- Crepeginger. Comn.(M)- Channakoova. Habit- Herb. Habitat- Moist deciduous and semi-evergreen forests, also in the plains. Distribution in Kerala- All Districts. Useful parts- Rhizome. Uses- Gastric problems, maintains cholesterol. Chemical constituents- Ziongeron and phenols.
  42. **Kaempferia rotunda L.** Family- Zingiberaceae. Comn(E)- Indian crocus. Comn.(M)- Chengazhineerkizhangu. Habit- Herb. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Rhizome. Uses-Gastric problems, baby food. Chemical constituents- Ziongeron and phenols.
  43. **Boesenbergia rotunda (L.) Mansfield.** Family- Zingiberaceae. Synn- *Curcuma rotunda L.*, *Kaempferia pandurata* Roxb., *Gastrochilus rotundus (L.) Alston.*, *Boesenbergia tiliaefolia* sensu Mangaly & Swarup Habit- Herb. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Rhizome.
  44. **Curcuma longa L.** Family- Zingiberaceae. Comn(E)- Turmeric. Comn.(M)- Manjal. Habit- Herb. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Rhizome. Uses- Commercial crop as minor spice, condiments, medicinally against skin problems fever. Chemical constituents- Curcumin and phenols.
  45. **Zingiber officinale Rosc.** Family- Zingiberaceae. Comn(E)- Ginger. Comn.(M)- Inchi. Habit- Herb. Habitat- Cultivated. Distribution in Kerala- All Districts. Useful parts-Rhizome. Uses- Commercial crop as spice, condiments, medicinally against skin problems, fever. Chemical constituents- Ziongeron, coumarins, phenols.
  46. **Zingiber zerumbet (L.) J.E. Smith.** Family- Zingiberaceae. Synn- *Amomum zerumbet L.*, Comn.(M)- Kattinchi. Habit- Herb. Habitat- Evergreen forests. Distribution in Kerala- All Districts. Useful parts-Rhizome. Uses- Condiments, pickle, medicinally against skin problems, fever. Chemical constituents- Ziongeron, coumarins, phenols.
  47. **Acorus calamus L.** Family- Araceae. Comn(E)- Sweet flag. Comn.(M)- Vayambu. Habit- Herb. Habitat- Semi-aquatic and marshy localities. Distribution in Kerala- All Districts. Useful parts-Rhizome, leaves. Uses- Baby care, Minor spice, Gastric problems, Chemical constituents- Coumarin, phenols, Hydroquinone.
  48. **Imperata cylindrica (L.) Raeusch.** Family- Poaceae. Synn- *Lagurus cylindricus L.*, *Imperata arundinacea* Cyrillo. Comn(E)- Sword Grass. Comn.(M)- Dharbha. Habit- Herb. Habitat- Grasslands, banks of backwaters, forest clearings and fallow fields. Distribution in Kerala- All Districts. Useful parts-Leaves. Uses- Sacred plant, Gastric problems.

Chemical constituents- Phenols.

49. **Vetiveria zizanioides (L.) Nash.** Family- Poaceae. Synn- *Phalaris zizanioides* L., *Andropogon squarrosus* sensu Hook.f. Comn(E)- Vetiver. Comn.(M)- Ramacham. Habit- Herb. Habitat-Grasslands, banks of backwaters, forest clearings and fallow fields. Distribution in Kerala- All Districts. Useful parts- Leaves, roots Uses- Cholesterol, fever, skin diseases. Chemical constituents- Phenols, vetiverol.

The work of Van Rheed helped to popularize the indigenous as well as its multi-faceted uses of medicinal plants especially

aromatic and spice plants across the country. This work also helped to establish the trade relationship Kerala with special reference to spices, medicinal and aromatic plants with the western world.

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