Comparative Study on the Medicinal Plant Use Data by Four Indigenous Tribes- Kattunaikkan, Mullakuruman, Adiyan and Kuruchiyar - of Wayanad District, Kerala

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Abstract: The present study was an attempt to record the quantitative data regarding medicinal plant use by four predominant tribes– Kattunaikkan, Mullakuruman, Adiyum and Kuruchiyar- of Wayanad District, Kerala, India. Mention of each use of a species with respect to a disease was treated as a separate event and considered as a user report. A total of 565 user reports were collected from the fifteen informants belonging to the four socio-cultural groups during the study period. User reports regarding 165 species from 63 different families were recorded. The data regarding the medicinal plant use were analysed.

Keywords: Ethnobotany-Wayanad-tribals- medicinal plant use.

I. INTRODUCTION

Modern people are alienated from environment so that we consider it as a place to visit or hike trough, while most indigenous tribes treat environment as a natural extension of themselves [1]. Alcorn [2,3] has discussed how the human relationships with plant resources, i.e., the human, cultural, and material uses of plants are largely shaped by history, and by physical and social environments. These relationships cover a very wide canvas, from wild foods, medicines, fibers, fodders, dyes, and body ornamentation, etc. to still more important, but less understood areas of the social and religious relationships, like beliefs, faith, taboos, worship and even protection and preservation.

The richness of plant diversity in any area is not evaluated by the number of species occurring there, but by the intensity of associations and dependence of the indigenous communities on that plant wealth and, respect for this knowledge helps in conservation [4]. Wayanad is a hilly district within Kerala state towards the southernmost end of India, with the highest percentage of tribal population recorded so far within the state. Documentation of data regarding edible plants [5, 6] used has been done in this area. Mere listing of medicinal plants used by some individual tribes has also been done [7, 8]. Wayanad, the green paradise, lies nestled among the misty mountains of Western Ghats at a height of 700-2100 m. above sea level on the northern part of the Kerala state. The name, Wayanad, is believed to have been derived from the word, Vayal nadu, meaning the land of paddy fields which comprises of about 2126 sq.kms. Evidences about New Stone Age civilization are obtained in plenty from the hills of Wayanad. The present study was an attempt to record the quantitative data regarding medicinal plant use by four predominant tribes– Kattunaikkan, Mullakuruman, Adiyum and Kuruchiyar- of Wayanad District, Kerala. When one considers the fast pace of modernisation and acculturation exposing these traditional communities to modern methods of medicine and lifestyles, this study is the urgent need of the hour.

II. MATERIAL AND METHODS

A. Study Area

Wayanad lies between North latitude 11°27' and 15°58' and East longitude 75°47' and 70°27'. It is bounded on the east by Nilgiris and Mysore districts of Tamil Nadu and Karnataka respectively, on the north by Coorg district of Karnataka, on the south by Malappuram districts and on the west by Kozhikode and Kannur districts of Kerala.
B. Data Collection

Study sites, knowledgeable informants identification, work plan, data collection procedures and literature survey was completed before starting field work. Fifteen informants, mainly healers and elders belonging to the four prominent socio-cultural communities – Mullakurunan, Kuruchiyar, Kattunaikkan, and Adiyen who were full time professionals in this field and widely accepted in their areas as well as other too, representing all regions were put to semi-structured interviews with pre arranged appointments lasting 2-3 hour duration followed by a transect walk to their natural environment from where they gathered plants. Follow up interviews were made at regular intervals covering all seasons from November 2008 to December 2014. The age of the informants varied from 36 years to 84 years. Except two, all of them were males. Informants were asked to spell out the remedies for the diseases and how they used them. The information regarding the use a particular species for a specific disease was treated as one user report. For each species, its local name, part used, method of use and conservation strategies were recorded. Prior informant consent was collected from all individuals regarding knowledge sharing. Some informants restrained from disclosing the method of using as they believed that it may loose its effect if made public. Live specimens for scientific identification were also collected during these walks.

C. Informants Profile

Among the data obtained from the pilot study, fifteen informants were selected for the quantitative ethnobotanical study from the four regions – South, North, West and East of Wayanad District respectively. They represented four prominent sociocultural communities – Mulla Kuruman, Kurichiyar, Kattunaikkan, and Adiya. As has already been mentioned, these communities are the most prevalent ones in the district and are entirely different in their social and economical status and have a long tradition and culture of their own. The tribe and region wise distribution of informants is given (Table 1).
Table 1. Tribe and region wise distribution of informants selected for the study

| Tribe        | South | North | West | East | No of informants |
|--------------|-------|-------|------|------|------------------|
| Kattunaikkan | +     | +     | -    | -    | 2                |
| Mulla Kuruman| ++    | +     | -    | ++   | 5                |
| Adiya        | -     | ++    | -    |      | 2                |
| Kurichiyar   | +     | ++    | ++   | +    | 6                |

‘+’ represents each informant and ‘-’ their absence.

III. RESULTS AND DISCUSSION

An inventory of fifteen knowledgeable tribal healers and helpers to healers from four socio-cultural groups were made and five hundred and sixty five user reports regarding 165 species were recorded from them. The four tribes studied had their own myths, beliefs and taboos regarding the causes for diseases and have magico-religious ritual healing methods for getting rid of them. All the four socio-cultural groups studied, believed that diseases are caused by supernatural influences of their own ancestral spirits or traditional deities as a curse for their own misdeeds, or due to sorcery from enemies. They had their own magico-religious rituals for getting rid of them and their own traditional healer entrusted with the power to do it for them. Herbal formulations are only a part of these rituals and they commonly believe that the magical power entrusted with the traditional healer is the major reason for cure. Most of the herbal prescriptions are made fresh from plants collected from their own wild premises and they seldom use stored pre-prepared formulations. Plants are collected judiciously from the abundant areas only and thus, these groups practice a sustainable use of herbal resources. Rules from Government officials restricting free entry into wild have changed their lifestyle patterns and have alienated them from their natural habitat. Most of the healers now have to take long walks into the woods for collecting medicines and this has forced them to collect and store plants at least temporarily, for a week’s use. Knowledge transmission is highly conservative among and across communities. Most of the individuals share some amount of knowledge related to general uses of herdals, but they seldom prescribe themselves, and always depend on the traditional healer of their own community for prescriptions, as they believe that formulations are inactive without his magical powers. Most of the herbalists are very conservative to disclose their formulations to others as they strongly believe that on disclosure, the formulations lose their power to heal. All these factors and exposure of the new generation to modern medicine have contributed to the decline of this valuable knowledge into oblivion and it is high time that, whatever left should be scientifically documented.

The data regarding 165 species are presented in the following format below (Table 2).- Sl. No., Family, Species name, No. of User reports, Quoted by which tribes, Part used, Disease/other uses, Method of use.

Regarding the data collected, 22 species were quoted by informants across the four tribes studied among which Briedelia stipularis (L.) Blume, Careya arborea Roxb. Coscinium fenestratum (Gaertn.) Colebr., Croton persimilis Muell., Curcuma longa L., Cyclaea peltata (Lam.) Hook., Diplolisia glaucescens (Blume) Diels., Entada rheedi Spreng., Hydrocotyle javanica Thunb., Justicia gendarussa Braun., Naravelia zeylanica (L.) D., Naringi crenulata (Roxb.) Nicolson., Pittosporum neelgherrense Wight & Arn., Pterocarpus marsupium Roxb., Pterospermum rubiginosum Heyne ex Wight & Arn., Ruta chalepensis L., Selaginella lepidophylla (Hook. & Grev.) Spring and Thottea siliquosa (Lam.) Ding Hou. were the species which were quoted most. Twenty eight species were quoted by the Kuruchiyar tribe alone which were not quoted across other tribes. Adiyani and Kattunaikkan tribes quoted 7 and 8 species which were not quoted by others respectively and Mullakuruman quoted 39 plants unique to their identity. Mullakuruman and Kuruchiyar tribes shared plant use data much and had almost 32 species which were quoted by informants from both group. Kuruchiyar shared seven species with Kattunaikkan with respect to the knowledge of medicinal importance.
Table 2. Medicinal Plant Use Data by Four Indigenous Tribes - of Wayanad District Kerala.

| Sl No | Family         | Species name                                      | No. of User reports | Quoted by | Part Used | DISEASE/other uses                      | METHOD                                      |
|-------|----------------|--------------------------------------------------|---------------------|-----------|-----------|----------------------------------------|---------------------------------------------|
| 1     | Amaranthaceae  | Acrpyrhynes aspera L.var. aspera                 | 1                   | KU        | Entire Plant | Inflammation                          | Decoction 1 ounce taken in thrice a day    |
| 2     | Araceae        | Acorus calamus L.                                | 1                   | AD        | Root       | Chest congestion due to mucus          | Powdered with pepper, dried ginger and 5 gm each chewed several times |
| 3     | Amaranthaceae  | Aervia lanata (L.) Juss. ex Schult.              | 2                   | MK        | Entire Plant | Urinary problems                      | Decoction 1 ounce taken in thrice a day    |
| 4     | Liliaceae      | Aloe vera (L.) Burm.                             | 2                   | MK        | Leaf Pulp  | Black marks on face                    | Scrubbed on face                           |
| 5     | Zingiberaceae  | Alpinia calcarata Rosc.                          | 1                   | KU        | Rhizome    | Muscle pain                           | One major ingredient for making pain relieving oil |
| 6     | Apocynaceae    | Alstonia scholaris (L.) R. Br.                   | 2                   | MK        | Bark       | Muscle pain                           | One major ingredient for making pain relieving oil |
| 7     | Apocynaceae    | Alstonia venenata R. Br.                         | 1                   | KU        | Bark       | Snake bite                            | Pasted and applied on wound               |
| 8     | Amaranthaceae  | Acrnanthus spinosus L.                           | 1                   | KU        | Entire Plant | Arthritis                             | Pasted and applied on skin (joints)       |
| 9     | Araceae        | Amorphophallus paonifolius (Dennst.) Nicolson var paonifolius | 2 | KT,AD | Corn | Fistula | Corn cut with bamboo and dried, powdered and taken with butter milk |
| 10    | Vitaceae       | Ampelocissus latifolia (Roxb.) Planch.           | 1                   | KU        | Stem       | Varicose vein                         | Method not disclosed                      |
| 11    | Anacardiaceae  | Anacardium occidentale L.                        | 2                   | KU,M,K    | Tender     | Loose motion                          | Tender leaves pasted with jeera and taken in |
| 12    | Menispermaceae | Anamirta cocculus (L.) Wight & Arn.              | 2                   | KT,KU     | Leaves     | Rheumatism                            | Extracted with hot oil with other herbal and applied over joints |
| 13    | Euphorbiaceae  | Antidesma acidum Retz.                           | 3                   | MK,A,AD   | Leaves     | Inflammation in mammary gland (veterinary) | Leaves pasted with fresh turmeric tubers and applied on mammary glands |
| 14    | Euphorbiaceae  | Aporsa acuminita Thw.                            | 1                   | KU        | Root Bark | Adding Body weight                    | Decoction taken in 1 ounce in the morning in empty stomach |
| 15    | Euphorbiaceae  | Aporosa cardiosperma (Gaertn. Merr. Ardisia solanaceae Roxb. | 1 | KU | Bark | Back pain | Decoction taken in 1 ounce 3 times a day |
| 16    | Myrsinaceae    | Ampelocissus latifolia (Roxb.) Planch.           | 2                   | MK,K,U    | Leaves     | Cultural use                          | Used during funeral                        |
| 17    | Aristolochiaceae | Aristolochia acuminate Lam.                     | 2                   | KT        | Root       | Snake bite                            | Pasted and applied on skin after cleaning the wound |
| 18    | Aristolochiaceae | Aristolochia indica L.                         | 1                   | KU        | Root       | Anti-poison treatment                 | Not disclosed                              |
| 19    | Astereaceae    | Artemisia nilagariaca (Clarke) Pamp.             | 1                   | KU        | Leaves     | Mites of Chicken                      | Leaves made into decoction with water and sprayed |
| 20    | Asclepiadaceae | Asclepias curassavica L.                         | 2                   | KT,KU,K   | Stem       | Anismpara skin galls                  | Exudates applied on skin                  |
| 21    | Liliaceae      | Asparagus racemosus Willd.                       | 8                   | MK,K,D,KT | Root       | Rheumatism                            | Decoction 1 ounce taken in empty stomach in the morning |
| 22    | Rutaceae       | Atalantia monophylla (L.) DC.                   | 1                   | KT        | Leaves     | Kaffa (bronchitis)                    | Leaves +Dried ginger + pepper + sugar powdered and given |
| 23    | Scrophulariaceae | Bacopa monnieri (L.) Pennell.                   | 2                   | AD,KU     | Leaves     | Increasing brain power                | Juice 1/2 ounce given for infants in the morning |
| 24    | Poaceae        | Bambsa bambah (L.) Voss.                         | 2                   | KU,M      | Powdery     | For cuts in skin                      | Applied over the skin and bandaged        |
| 25    | Cucurbitaceae  | Benincasa hispida (Thunb.) Cogn.                | 2                   | KU,K     | Fruit      | Enlarged prostrate                    | Fruit taken in free stomach in the morning |
| 26    | Oxalidaceae    | Biophyutum reinwardthi (Zucc.) Klotzsch. var. reinwardthi | 1 | KT  | Entire Plant | Kidney stone                         | Decoction in water                        |
27. Brassicaceae: Brassica juncea (L.) Czern. & Cos.  |  2  |  MK  |  Bark  |  Stomach ache  |  Decoction taken in 1 ounce 3 times a day
28. Euphorbiaceae: Briedelia retusa (L.) A. Juss.  |  2  |  MK  |  Leaves  |  Scabies  |  Pasted and applied on skin
29. Euphorbiaceae: Briedelia stipularis (L.) Blume  |  14 |  MK, K, T,KU, AD  |  Bark  |  Aphrodisiac for men  |  Decoction in water (used as a substitute for drinking water)
30. Fabaceae: Butea monosperma (Lam.),Taub.  |  2  |  MK, K, U  |  Bark  |  Stomach ache  |  Decoction in water
31. Caesalpinia: Caesalpinia bondoc (L.) Roxb.  |  8  |  KU  |  Bark  |  Stomach ache  |  Decoction taken in 1 ounce 3 times a day
32. Asclepiadaceae: Calotropis gigantea (L.) R. Br.  |  2  |  MK  |  Leaves  |  Scabies  |  Pasted and applied on skin
33. Verbenaceae: Calycoperis floribunda Lam.  |  3  |  MK, KU  |  Water From Stem Cut  |  Urinary problem  |  Water exuding from cut portion of stems given twice a day
34. Burseraceae: Canarium strictum Roxb.  |  2  |  KT, KU  |  Resin  |  Fumigator  |  Fumigate in the evening for mosquito
35. Solanaceae: Capsicum frutescens L.  |  4  |  MK, KU  |  Fruit  |  Pressure  |  Two fruits taken in daily
36. Sapindaceae: Caricosperrnum halicabum L.  |  5  |  MK, KU  |  Shoot  |  Inflammation  |  Bark used in anti inflammatory oil preparation
37. Lecithidaceae: Careya arborea Roxb.  |  8  |  MK, K, T,KU, AD  |  Bark  |  Wound  |  Bark ground into paste and applied on the wound
38. Caesalpinia: Cassia fistula L.  |  1  |  KT  |  Bark  |  Stomach ache  |  Powdered in water and taken in
39. Celastraceae: Celastrus paniculatus Wild.  |  1  |  AD  |  Bark  |  Inflammation  |  Bark used in anti inflammatory oil preparation
40. Apiceae: Centellia asiatica (L.) Urban.  |  5  |  MK, K, U, AD  |  Entire Plant  |  Internal inflammation  |  Pasted and given in
41. Chenopodiaceae: Chenopodium ambrosiodes L.  |  3  |  MK, KU, AD  |  Leaves  |  Excessive crying of infants  |  Pasted in water and given in
42. Vitaceae: Cissus quadrangularis L.  |  1  |  AD  |  Stem  |  Bone breakage Healing  |  Pasted and bandaged over skin
43. Vitaceae: Cissus repens Lam.  |  1  |  KU  |  Leaves  |  Bone fracture  |  Leaves + Pterospermum bark pasted and applied on skin
44. Rutaceae: Clausena anisata (Wildld.) Hook.  |  1  |  KT  |  Leaves  |  Heel skin soar  |  Pasted and applied on heels
45. Ranunculaceae: Clematis gouriana Roxb.ex DC.  |  3  |  KT, AD  |  Stem  |  Head ache  |  Stem is squeezed and covered by cloth and inhaled deep
46. Verbenaceae: Clerodendrum infortunatum L.  |  3  |  MK, KU  |  Root  |  Stomach pain  |  Decoction taken in 1 ounce 3 times a day
47. Fabaceae: Clitoria ternatea L. var. ternatea  |  2  |  MK  |  Shoot  |  Inflammation  |  Bark used in anti inflammatory oil preparation
48. Menispermaceae: Coscinium fenestratum (Gaertn.) Colebr.  |  14 |  MK, K, T,KU, AD  |  Stem  |  Hyper pressure  |  Pieces of stem put in 1 glass water overnight and taken in the morning
49. Euphorbiaceae: Croton persimilis Muell.  |  11 |  MK, K, T,KU, AD  |  Root Bark  |  Inflammation  |  Decoction 1 ounce taken in daily in the morning
50. Periploceae: Cryptolepis buchananii Roem.,&Schult.  |  2  |  MK, KU  |  Stem  |  For increasing milk in lactating mothers  |  Stem kept under her pillow while sleeping
51. Zingeberaceae: Curcuma longa L.  |  16 |  MK, K, T,KU, AD  |  Rhiomone  |  Stomach worms  |  Pasted in buttermilk and taken in
52. Zingeberaceae: Curcuma neilgherrensis Wight  |  1  |  KU  |  Powder  |  Vaginal discharge  |  Rhizome powder 5 gm taken in with milk in empty stomach in morning
53. Amaranthaceae: Cyathula prostrata (L.) Blume  |  4  |  MK, KU  |  Entire Plant  |  Inflammation  |  Decoction 1 ounce taken in thrice a day
54. Menispermaceae: Cyclea peltata (Lam.) Hook.  |  11 |  MK, K, T,KU  |  Leaves  |  Swellings  |  Leaves pasted and applied on skin
83 Acanthaceae
55 Boraginaceae
56 Solanaceae
57 Solanaceae
58 Ebenaceae
59 Menispermae
60 Dracenaceae
61 Caryophyllaceae
62 Asteraceae
63 Asteraceae
64 Myrsinaceae
65 Myrsinaceae
66 Asteraceae
67 Musaceae
68 Mimosaceae
69 Fabaceae
70 Moraceae
71 Rutaceae
72 Tiliaceae
73 Asclepiadaceae
74 Rubiaceae
75 Sterculiaceae
76 Periplocaeeae
77 Malvaceae
78 Euphorbiaceae
79 Flacourtiaeeae
80 Apiaceae
81 Acanthaceae
82 Euphorbiaceae
83 Acanthacea

| Family          | Plant Name                        | Part Used     | Condition                  | Method of Use                                                                 |
|-----------------|-----------------------------------|---------------|----------------------------|-------------------------------------------------------------------------------|
| Cynoglossum     | Cynoglossum zeylanicum (Vahl. ex | Leaves        | Migraine                  | Leaves pasted and applied on forehead                                          |
| Datura metel    | (Blume) Diels.                    |               |                            |                                                                                |
| Datura stramonium L. |                         | Leaves        | Arthritis                 | Leaves extracted in oil and applied                                           |
| Diospyros       | Diospyros peregrina (Gaertn.)     | Fruit         | Treating conception       | Dried with croton persimilis leaf and taken in as powder 5 gms in mornings    |
| Diplocisia      | Diplocisia glaucescens (Blume)    | Root Bark     | For back pain             | Decoction 1 ounce taken in 3 times a day                                       |
| Dracena terrestris roxb. |                     | Leaves        | Arthritis                 | Leaves extracted in oil and applied                                           |
| Drymaria cardota | Drymaria cardota ssp. diandra    | Leaves        | Arthritis                 | Leaves extracted in oil and applied                                           |
| Eclipta prostrata L. |                   | Leaves        | Hair oil                  | Extracted hot in oil and applied on hair for growth                          |
| Elephantopus scaber L. |                | Entire Plant  | Ulcer                     | Decoction in water 1 ounce taken in thrice a day                               |
| Embelia ribes | Embelia ribes Burm.              | Seeds         | Diarrhoea                 | Decoction 1 ounce taken in                                                    |
| Embelia tsjeram-cottam | Embelia tsjeram-cottam (Roem. & Schult.) DC. | Seeds | Diarrhoea                 | Decoction 1 ounce taken in                                                    |
| Emilia sonchifolia L. |                      | Entire Plant  | Pressure                  | Entire plant with turmeric pasted and taken in                               |
| Ensete superbom | Ensete superbom (Roxb.) Cheesman | Seeds         | Kidney stone              | Pasted in milk and taken in empty stomach in morning                           |
| Entada rheedi spreng. |                     | Seed          | Back pain                 | Decoction of cotyledons in water given twice a day                             |
| Erythrina variegata L. |                      | Bark          | Diabetes                  | Powder 5 gms taken in with hot water in empty stomach in morning              |
| Ficus exasperata | Ficus exasperata Vahl.           | Root          | Cholera                   | Watery exudate from cut root taken in                                           |
| Glycosmis       | Glycosmis pentaphylla (Retz.) DC. | Root Exudate  | Stomach ache              | Pasted in water and taken in                                                   |
| Grewia tilifolia | Grewia tilifolia Vahl.           | Bark          | To burst skin lesions     | Pasted in water and applied around the mouth of the lesion                     |
| Gymnema sylvestre | Gymnema sylvestre (Retz.) R. Br. | Leaves        | Diabetes                  | Leaves taken raw                                                               |
| Helicteres isora L. |                      | Root          | Rheumatism                | Extracted with hot oil and applied over joints                                 |
| Hemicidens indicus (L.) R. Br. |                | Root Tuber    | Skin swellings            | Ground into paste with rice and applied                                        |
| Hibiscus        | Hibiscus hispidissimus Griff.    | Root          | Fatigue                   | Decoction in water taken in                                                   |
| Homonoma riparia | Homonoma riparia Lour.           | Root          | Urinary problem           | Decoction in water taken twice a day                                            |
| Hydnocarpus      | Hydnocarpus pertandrum (Buch.- | Seed Oil      | Burning sensation on skin | Seed oil with Rucius seed oil and Neem oil applied on skin hot                |
| Hydrocotyle      | Hydrocotyle javanica Thunb.      | Leaves        | Polio                     | Juice of leaves given                                                         |
| Hydrophilus schulli (Buch.-Ham.) M. R. & S. M. | | Leaf          | Scabies                   | Extracted with hot oil and applied over infected area externally               |
| Jatropha curcas L. | Jatropha curcas L.             | Leaves        | Rheumatism                | Used in making fermented decoction (kashayam)                                 |
| Justicia adhatoda L. |                     | Leaves        | Cough                     | Juice taken                                                                  |
| N.  | Genus                     | Species                          | Part Used | Condition                  | Method                                                                 |
|-----|--------------------------|----------------------------------|-----------|-----------------------------|------------------------------------------------------------------------|
| 84  | Acanthaceae              | Justicia betonica L. var. betonica | Leaves   | Pressure                    | Leaves, garlic and jeera pasted and taken in (avoid salt in dishes)   |
| 85  | Acanthaceae              | Justicia gendarussa Brum.        | Leaves   | Arthritis                   | Leaves extracted with oil and applied on joints before bath            |
| 86  | Anacardiaceae            | Lamnea coromandelica (Houtt.) Merr. | Bark     | Wound healing               | Fresh bark pasted and applied as bandage over wounds                   |
| 87  | Verbenaceae              | Lantana camara L. var. camara    | Leaves   | Mumps                       | Leaves with Turmeric pasted and applied on skin                        |
| 88  | Piperaceae               | Lepianthes umbellata (L.) Rafin. | Inflorescense | Asthma                     | Powder taken in with sugar candy                                       |
| 89  | Lamiaceae                | Leucas aspera (Wild.) Link.      | Leaves   | Migrain                     | Two drops of leaf juice applied in the nose (heavy pain for some time) |
| 90  | Lauraceae                | Litsea coriacea (Heyne ex Mesner) Hook. | Bark     | Rheumatism                  | Extracted with hot oil with other herbal and applied over joints      |
| 91  | Lobeliaceae              | Lobelia nicotianifolia Roth ex Roem. & Schult. | Leaves | Karappan                    | Leaves fried in coconut oil, pasted and applied on the skin            |
| 92  | Anacardiaceae            | Mangifera indica L.              | Bark     | Diarrhoea                   | Bark covered with banana leaf sheath and put in fire then juice taken in |
| 93  | Rutaceae                 | Melicope lunu-ankenda (Gaertn.) Hartley | Tender leaves | Stomach ache                | Paste 5 gm eaten raw                                                   |
| 94  | Mimosaceae               | Mimosa pudica L.                 | Tender leaves | Stomach ache                | Paste 5 gm eaten raw                                                   |
| 95  | Moringaceae              | Moringa pterygosperma Gaertn.    | Flowers  | Aphrodisiac                 | Taken in as vegetable                                                  |
| 96  | Fabaceae                 | Mucuna atropurpurea DC.          | Seeds    | Aphrodisiac                 | Seeds powdered and taken in before bed in milk                         |
| 97  | Ploygonaceae             | Muehlenbeckia platyclados Meissn. | Leaves   | Arthritis                   | Pasted and applied on joints                                           |
| 98  | Musaceae                 | Musa acuminata Colla.            | Seeds    | Kidney stone                | Pasted in milk and taken in                                             |
| 99  | Musaceae                 | Musa paradissiaca Colla.         | Fruit    | Stomach ache                | Decocction taken in                                                     |
| 10  | Rubiaceae                | Mussaenda frondosa L.            | Leaves   | Burns                       | Roasted in coconut oil and the oil is applied over burns              |
| 10  | Myristicaceae            | Myristica fragrans Houtt.        | Aril     | Stomach pain                | Powdered and taken in                                                  |
| 10  | Ranunculaceae            | Naravelia zeylanica (L.) DC.     | Stem     | Head ache                   | Stem is squeezed and covered by cloth and inhaled deep                 |
| 10  | Rutaceae                 | Naringi crenulata (Roxb.) Nicolson | Bark    | Stomach ache                | Bark decoction in water and taken in                                  |
| 10  | Nellumbonaceae           | Nelumbo nucifera Gaertn.         | Petals   | Skin vitalizer              | Leaf powdered and made into paste with honey and applied on face       |
| 10  | Icacinaceae              | Nothapodytes nimmoniana (Graham) Mabb. | Bark   | Fitz (apasmaram)           | Bark used for preparing medicinal bath water                            |
| 10  | Lamiaceae                | Ocimum gratissimum L.            | Leaves   | Dandruff                    | Extracted with hot oil and massaged before daily bathing               |
| 10  | Lamiaceae                | Ocimum tenuiflorum L.            | Leaves   | Black spots on face         | Hot extraction in oil and applied on face                              |
| 10  | Poaceae                  | Oryza sativa L. (demographic var. navara). | Seeds  | Neural rejuvenation         | Pasted and applied over skin                                           |
| 10  | Melastromaceae           | Osbeckia virgata D. Don ex Wight & Arn. | Leaves | Scabies                     | Extracted in oil and applied on skin                                   |
| Family              | Species                                      | Part Used | Method                        | Uses                                                                 |
|---------------------|----------------------------------------------|-----------|-------------------------------|----------------------------------------------------------------------|
| Oxalidaceae         | Oxalis corniculata L.                        | Leaves   | Juice given with butter milk | Pufartermiaction to remove dirt from stomach                           |
|                     |                                               |          |                               |                                                                       |
| Rutaceae            | Paramignya monophylla Wight.                | Leaves   | Decoction in oil             | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Poaceae             | Pennisetum hohenackeri Hochst.ex.Steut.    | Entire   | Decoction in water            | Pufaturements in the morning                                           |
|                     |                                               | Plant    |                               |                                                                       |
| Ploygonacaeae       | Persicaria chinensis (L.) Gross.             | Leaves   | Decoction in water            | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Euphorbiaceae       | Phyllanthus emblica L.                      | Leaves   | Extracted in oil             | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Euphorbiaceae       | Phyllanthus urinaria L.                     | Leaves   | Pasted and given             | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Piperaceae          | Piper longum L.                             | Flower   | Made into curry              | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Pittosporaceae      | Pittosporum neelgherrense Wight & Arn.      | Bark     | Decoction in water            | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Lamiaceae           | Plectranthus amboinicus (Lour.) Spreng.     | Leaves   | Juicy given in               | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Lamiaceae           | Plectranthus hudiensis var. tomentosus (Benth. ex E.Mey.) Codd. | Leaves | Made into decoction and taken | Pufaturements in the morning                                           |
|                     |                                               |          | thrice a day                 |                                                                       |
| Fabaceae            | Pongamia pinnata (L.) Pierre.               | Bark     | Powdered and applied on skin | Pufaturements in the morning                                           |
|                     |                                               |          | instead of soap              |                                                                       |
| Araceae             | Pothis scandens L.                          | Leaf     | Decoction in water            | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Myrtaceae           | Psidium guajava L.                          | Leaves   | Leaf juice applied externally | Pufaturements in the morning                                           |
|                     |                                               |          | over small wounds            |                                                                       |
| Fabaceae            | Pierocarpus marsupium Roxb.                 | Bark     | Juice of fresh bark taken    | Pufaturements in the morning                                           |
|                     |                                               |          | raw 1 ounce in the morning   |                                                                       |
| Sterculiaceae       | Piperspermum rubiginosum Heyne ex Wight & Arn. | Bark | Powder pasted with rice soup | Pufaturements in the morning                                           |
|                     |                                               |          | as a bandage over broken     |                                                                       |
| Apocynaceae         | Rauvolvia serpentina (L.) Berth. ex Kurz.   | Root     | Rooted and given             | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Acanthaceae         | Rhaphidophora pertusa (Roxb.) Schott.       | Bark     | Bark is pasted in water and   | Pufaturements in the morning                                           |
|                     |                                               |          | given in thrice a day        |                                                                       |
| Orchidaceae         | Rhynochostylis retusa (L.) Bl.              | Leaves   | Leaves are heated and        | Pufaturements in the morning                                           |
|                     |                                               |          | squeezed and two drops of   |                                                                       |
| Euphorbiaceae       | Ricinus communis L.                         | Root     | leaf juice applied            | Pufaturements in the morning                                           |
|                     |                                               |          | externally over joints       |                                                                       |
| Verbenaceae         | Rotheca serrata (L.) Steane & Mabh.         | Root     | Decoction 1 ounce taken      | Pufaturements in the morning                                           |
|                     |                                               |          | thrice a day                 |                                                                       |
| Boraginaceae        | Rotula aquatica Lour.                       | Shoot    | Inflammation                 | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Rubiaceae           | Rubia cordifolia L.                         | Root     | Decoction in water            | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Rutaceae            | Ruta chalepensis L.                         | Leaves   | Extracted in oil             | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Sapindaceae         | Sapindus trifoliatus L.                    | Fruit    | Make a paste in water         | Pufaturements in the morning                                           |
|                     |                                               |          | and dilute                   |                                                                       |
| Caesalpiniae        | Saraca asoca (Roxb.) de Wilde.              | Flower   | Method not disclosed         | Pufaturements in the morning                                           |
|                     |                                               |          |                               |                                                                       |
| Araliaceae          | Schefflera rostrata (Wight)                 | Leaves   | Decoction 1 ounce given      | Pufaturements in the morning                                           |
|                     |                                               |          | thrice a day                 |                                                                       |
| No. | Family                  | Common Name                             | Part(s) Used                | Treatment                                                                 |
|-----|-------------------------|------------------------------------------|----------------------------|---------------------------------------------------------------------------|
| 13  | Sapindaceae             | Schleichera oleosa (Lour) Oken           | Seed                       | Arthritis                                                                  |
| 13  | Santalaceae             | Scleropyrum pentandrum (Dennst.) Mabb.   | Root Bark                  | Pasted in oil and applied on joints                                       |
| 14  | Scrophulariaceae        | Scoparia dulcis L.                       | Entire Plant               | Kidney stone                                                               |
| 14  | Selaginellaceae         | Selaginella lepidophylla (Hook. & Grev.) Spring | Entire Plant | Vaginal discharge Powder taken in with milk                                 |
| 14  | Anacardiaceae           | Semecarpus travancorica Bedd.            | Root Bark                  | Pasted in oil and applied on joints                                       |
| 14  | Caesalpiniaae           | Senna tora (L.) Roxb.                    | Seeds                      | Body pain                                                                 |
| 14  | Malvacaeae              | Sida rhomboidea Roxb. ex Fleming         | Entire Plant               | Plant boiled in oil and applied                                            |
| 14  | Fabaceae                | Smithia conferta Smith in Rees.          | Leaves                     | Pasted in water and applied on hair                                       |
| 14  | Solanaceae              | Solanum americanum Mill.                | Leaves                     | Urinary problem Decoction in water taken in                               |
| 14  | Asteraceae              | Sphaeranthus indicus L.                  | Leaves                     | Sleeping problem Pasted and taken in                                       |
| 14  | Rubiaceae               | Stermacoce latifolia Aubl.              | Leaves                     | Wound Made in to paste and applied on wounds                               |
| 14  | Anacardiaceae           | Spondias pinnata (L.) Kurz.             | Bark                       | Loose motion Juice is mixed with butter milk and taken raw twice a day     |
| 14  | Verbenaceae             | Stachytarpha jamaicensis (L) Vahl.      | Leaves                     | Paste applied externally over affected area for few hours                |
| 14  | Myrtaceae               | Syzygium caryophyllatum (L) Alston.     | Leaf                       | Jaundice Decoction taken in 1 ounce in the morning in empty stomach       |
| 14  | Combretaceae            | Terminalia bellirica (Gaertn.) Roxb.    | Bark                       | Small pox Decoction taken in 1 ounce 3 times a day                        |
| 14  | Combretaceae            | Terminalia paniculata Roth.             | Hyper pressure             | Decoction taken in 1 ounce 3 times a day                                   |
| 14  | Aristolochiaceae        | Thottea siliquosa (Lam.) Ding Hou.      | Seeds                      | Stomach ache Seeds pasted and given in                                     |
| 15  | Menispermaceae          | Tinospora cordifolia (Willd.) Miers.     | Stern                      | Arthritis Stem juice given                                                |
| 15  | Rutaceae                | Toddalia asiatica (L.) Lam.             | Root                       | Vaginal discharge Root bark is ground and given with milk                 |
| 15  | Zygophyllaceae          | Tribulus terrestris L.                  | Seed                       | Migraine Decoction in water                                               |
| 15  | Asclepiadaceae          | Tylophora indica var. glabra (Decne.) Huber | Leaves                   | Bronchitis Powdered and taken in with jaggery                             |
| 15  | Rhamnaceae              | Ventilago maderaspatana Gaertn.          | Bark                       | Skin diseases Method not disclosed                                        |
| 15  | Asteraceae              | Vernonia cinerea (L.) Less.             | Leaves                     | Conjunctivitis Juice applied raw in eyes                                   |
| 15  | Verbenaceae             | Vitex leucocylon L.                     | Root                       | Hyper pressure Decoction in water thrice a day                            |
| 15  | Verbenaceae             | Vitex negundu L.                        | Leaves                     | Diabetes Prepare decoction in water and drink daily                       |
| 15  | Apocynaceae             | Wrightia tinctoria (Roxb.) Br.          | Leaves                     | Psoriasis Roasted in coconut oil and the oil is applied over burns         |
| 15  | Zingeberaceae           | Zingiber officinale Rosc.               | Rhizome                    | Stomach ache A piece chewed with salt                                       |
| 15  | Rhamnaceae              | Zizipus rugosa Lam.                     | Bark                       | Stomach ache Pasted and given in                                           |

MK= Mullakuruman, KT= Kattunaikkan, KU= Kuruchiyar, AD= Adiyam

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IV. CONCLUSION

A checklist of plants can be made for each disease category. Depending on the number of user reports, a species wise priority list can be made for each disease category so that activity guided phytochemical fractionation can be done on these species as future work which may result in lead molecules for novel drug discovery. Preparation of a digital online inventory regarding the data collected can be made as future work. The data presented here was an attempt to document the fast eroding indigenous knowledge which has an evolutionary history of several generations through trial and error methods and has been traditionally transferred orally. In this age of modernisation where these traditional communities are put in pressure to adapt modern systems of medicine it is high time to preserve them before it is lost forever.

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