

CHAPTER 7

RESULT

Result

The life of a man needs innumerable materials for his survival. All these materials they were collecting from nature in early days. But with development of science and technology man started using artificially made materials. But, in tribal life even today the importance of naturally produced materials are the main resources for survival. However, all recorded resources are grouped under some categories for better understanding as follows:

1. The Edible Plants
2. The Fodder Plants
3. The Medicinal Plants
4. Plants for House Building
5. Plants used as Fire Wood
6. The Religious Plants
7. The Ornamental & Decorative Plants
8. Plants in Folklores; etc.

The results of present survey among the *Meches* have been discussed under some separate sections:

- 7.1. Recorded Edible Plants
- 7.2. Recorded Fodder Plants
- 7.3. Recorded Plants for Domestic Uses
- 7.4. Recorded Medicinal Plants
- 7.5. Recorded Plants for Veterinary Medicines
- 7.6. Recorded Poisonous Plants
- 7.7. Preparation of *Jou*
- 7.8. Recorded Ornamental & Decorative Plants
- 7.9. Recorded Religious Plants
- 7.10. Plants Referred in Folklores
- 7.11. Plants Related to Birth Marriage & Death
- 7.12. Recorded plants for Festivals & Worship
- 7.13. Recorded Plants in Traditional Cuisine

7.1. Recorded Edible Plants

7.1.1. ENUMERATION OF RECORDED EDIBLE PLANTS

The present study documented the uses of 121 species of wild plants collected and eaten by *Mech* people. Such plants are enumerated below along with their vernacular names, edible parts, mode of consumption and reference to voucher specimens.

Acmella calva (DC.) Jansen [Asteraceae]

Vernacular Name: *Usumai* (Mech); Exscicattus: *Ajita & AP Das 118*.

Fried leaves are consumed as vegetable.

Aegle marmelos (Linnaeus) Correa [Rutaceae]

Vernacular Name: *Bel Bingfang* (Mech); Exscicattus: *Ajita & AP Das 042*.

Aromatic pulp is eaten as such or as a drink with sugar.

Alocasia macrorrhizos (Linnaeus) G. Don [Araceae]

Vernacular Name: *Mana Thadung* (Mech); Exscicattus: *Ajita & AP Das 322*.

Boiled tubers and petiole are eaten.

Alternanthera philoxeroides (Martius) Grisebach [Amaranthaceae]

Vernacular Name: *Chhetchi* (Mech); Exscicattus: *Ajita & AP Das 243*.

Leaves are consumed as vegetable.

Alternanthera paronichioides St. Hill [Amaranthaceae]

Vernacular Name: *Hagrani Moigong* (Mech); Exscicattus: *Ajita & AP Das 276, 430*.

Whole plants are cooked and eaten.

Alternanthera sessilis (Linnaeus) R. Brown ex DC. [Amaranthaceae]

Vernacular Name: *Nunni* (Mech); Exscicattus: *Ajita & AP Das 254, 300*.

Fried leaves are eaten.

Alpinia nigra (Gaertner) Burt [Zingiberaceae]

Vernacular Name: *Tharai* (Mech); Exscicattus: *Ajita & AP Das 047*.

Fried inner sheaths of pseudostem is eaten and used for the preparation of *Sabai Gwchhwu* [*Vigna mungo* (Linnaeus) Hepper] dal.

Amaranthus lividus Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 274*.

Young shoots are cooked as vegetable.

Amaranthus spinosus Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 103*.

Young shoots are cooked as vegetables.

Amaranthus viridis Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 275*.

Young shoots are cooked as vegetables.

Amorphophallus bulbifer (Roxburgh) Blume [Araceae]

Vernacular Name: *Tha Thadung* (Mech); Exscicattus: *Ajita & AP Das 081*.

Boiled underground tuber is eaten and cooked in curries.

Annona reticulata Linnaeus [Anonaceae]

Vernacular Name: *Balam Fithai* (Mech); Exscicattus: *Ajita & AP Das 253*.

Ripe fruits are edible.

Ardisia solanacea Roxburgh [Myrsinaceae]

Vernacular Name: *Hagrani Fithai* (Mech); Exscicattus: *Ajita & AP Das 195*.

Ripe fruits are eaten raw.

Artocarpus chama Buchanan-Hamilton [Moraceae]

Vernacular Name: *Lator* (Mech); Exscicattus: *Ajita & AP Das 117*.

Ripe fruits are eaten.

Artocarpus heterophyllus Lamarck [Moraceae]

Vernacular Name: *Khanthal* (Mech); Exscicattus: *Ajita & AP Das 244*.

Ripe fruits are eaten and young fruits are cooked as vegetable.

Artocarpus lacucha Buchanan-Hamilton [Moraceae]

Vernacular Name: *Daoa* (Mech); Exscicattus: *Ajita & AP Das 170*.

Ripe fruits are edible.

Azadirachta indica A. Jussieu [Meliaceae]

Vernacular Name: *Neem Bingfang* (Mech); Exscicattus: *Ajita & AP Das 038*.

Fried leaves are eaten.

Baccaurea ramiflora Loureiro [Euphorbiaceae] (Plate VI, Fig. A).

Vernacular Name: *Khusumai* (Mech); Exscicattus: *Ajita & AP Das 026*.

Ripe fruits are eaten.

Bacopa monnieri (Linnaeus) Pennell [Scrophulariaceae]

Vernacular Name: *Barami* (Mech); Exscicattus: *Ajita & AP Das 245*.

Fried whole plants are consumed as vegetable.

Bambusa nutans Wallich *ex* Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 286*.

New grown part is cooked as vegetable and also used for making prickles.

Bauhinia purpurea Linnaeus [Caesalpiniaceae]

Vernacular Name: *Khainchon* (Mech); Exscicattus: *Ajita & AP Das 246*.

Fried flower buds are edible.

Bauhinia variegata Linnaeus [Caesalpiniaceae]

Vernacular Name: *Khainchon* (Mech); Exscicattus: *Ajita & AP Das 247*.

Fried flower buds are eaten.

Boerhavia coccinea Miller [Nyctaginaceae]

Vernacular Name: *Punarnova* (Mech); Exscicattus: *Ajita & AP Das 218*.

Fried leaves are edible.

Calamus erectus Roxburgh [Arecaceae]

Vernacular Name: *Raidong* (Mech); Exscicattus: *Ajita & AP Das 046*.

Ripe fruits are eaten raw and roasted tender leaf-sheath is edible.

Cannabis sativa Linnaeus [Cannabaceae]

Vernacular Name: *Ganja* (Mech); Exscicattus: *Ajita & AP Das 314*.

Raw leaves are edible.

Carica papaya Linnaeus [Caricaceae]

Vernacular Name: *Thul-mul* (Mech); Exscicattus: *Ajita & AP Das 475*.

Flowers are cooked in traditional curry (*Inghur Khari*).

Cassia occidentalis Linnaeus [Caesalpiniaceae]

Vernacular Name: *Sunda Bilai* (Mech); Exscicattus: *Ajita & AP Das 461*.

Young fried leaves are consumed as vegetable.

Centella asiatica (Linnaeus) Urban. [Apiaceae]

Vernacular Name: *Manimuni Gedet* (Mech); Exscicattus: *Ajita & AP Das 006*.

Whole plants are cooked as vegetable.

Chenopodium album Linnaeus [Chenopodiaceae]

Vernacular Name: *Bothhua* (Mech); Exscicattus: *Ajita & AP Das 298*.

Leaves are cooked as vegetables.

Cissus repens Lamarck [Vitaceae]

Vernacular Name: *Bindong* (Mech); Exscicattus: *Ajita & AP Das 208*.

Fried tender leaves are eaten.

Cissus simplex Blanco [Vitaceae]

Vernacular Name: *Daeiilarang* (Mech); Exscicattus: *Ajita & AP Das 248*.

Juice of inside-stem is drunk.

Citrullus lanatus (Thunberg) Matsumura & Nakai [Cucurbitaceae]

Vernacular Name: *Gumbri* (Mech); Exscicattus: *Ajita & AP Das 204*.

Ripe fruits are edible and young fruits are consumed as vegetable.

Citrus limon (Linnaeus) Osbeck [Rutaceae]

Vernacular Name: *Nareng* (Mech); Exscicattus: *Ajita & AP Das 073*.

Fruits are edible.

Coccinia grandis (Linnaeus) Voigt [Cucurbitaceae] (Plate VI, Fig. B).

Vernacular Name: *Kundri* (Mech); Exscicattus: *Ajita & AP Das 123*.

Young green fruits and leaves are cooked as vegetables.

Colocasia esculenta (Linnaeus) Schott [Araceae] (Plate VI, Fig. C).

Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 050*.

Young leaves, petioles, flowers and esculent roots are cooked as vegetables.

Commelina benghalensis Linnaeus [Commelinaceae] (Plate VI, Fig. D).

Vernacular Name: *Sanai Bibar* (Mech); Exscicattus: *Ajita & AP Das 319*.

Fried leaves are eaten.

Corchorus capsularis Linnaeus [Tiliaceae]

Vernacular Name: *Phatto* (Mech); Exscicattus: *Ajita & AP Das 349*.

Young and matured leaves are consumed as vegetable.

Costus speciosus (Koenig ex Retzius) Smith [Costaceae]

Vernacular Name: *Debgugri* (Mech); Exscicattus: *Ajita & AP Das 143*.

Leaf-sheath is cooked as vegetable.

Curcuma longa Linnaeus [Zingiberaceae]

Vernacular Name: *Haldi* (Mech); Exscicattus: *Ajita & AP Das 348*.

Rhizome is edible.

Deeringia amaranthoides (Lamarck) Merrill [Amaranthaceae]

Vernacular Name: *Maibet* (Mech); Exscicattus: *Ajita & AP Das 085*.

Young leafy shoots are cooked as vegetables.

Dillenia indica Linnaeus [Dilleniaceae]

Vernacular Name: *Thaidig* (Mech); Exscicattus: *Ajita & AP Das 022*.

Fruits are eaten raw and used for preparing pickles.

Dillenia pentagyna Roxburgh [Dilleniaceae]

Vernacular Name: *Rae Bingfang* (Mech); Exscicattus: *Ajita & AP Das 312*.

Ripe fruit are eaten raw.

Dioscorea bulbifera Linnaeus [Dioscoreaceae]

Vernacular Name: *Thaganda* (Mech); Exscicattus: *Ajita & AP Das 256*.

Boiled root-tuber is edible.

Dioscorea esculenta (Loureiro) Burkill [Dioscoreaceae]

Vernacular Name: *Thaganda* (Mech); Exscicattus: *Ajita & AP Das 257*.

Boiled root-tuber is eaten.

Dioscorea pentaphylla Linnaeus [Dioscoreaceae]

Vernacular Name: *Thaganda* (Mech); Exscicattus: *Ajita & AP Das 273*.

Boiled root-tuber is edible.

Dioscorea pubera Blume [Dioscoreaceae]

Vernacular Name: *Thaganda* (Mech); Exscicattus: *Ajita & AP Das 255*.

Boiled root-tuber is edible.

Diospyros malabarica (Desrousseaux) Kosteletsky [Ebenaceae]

Vernacular Name: *Gab Bingfang* (Mech); Exscicattus: *Ajita & AP Das 345*.

Ripe fruits are eaten.

Diplazium esculentum (Retzius) Swartz [Athyriaceae]

Vernacular Name: *Dingkhisa* (Mech); Exscicattus: *Ajita & AP Das 036*.

Tender fronds are cooked as vegetables.

Diplocyclos palmatus (Linnaeus) Juffrey [Cucurbitaceae]

Vernacular Name: *Gumbri* (Mech); Exscicattus: *Ajita & AP Das 163*.

Young fruits are cooked as vegetable.

Drymaria cordata (Linnaeus) Willdenow ex Roemer & Schultes [Caryophyllaceae] (Plate VI, Fig. E).

Vernacular Name: *Barmadaree* (Mech); Exscicattus: *Ajita & AP Das 146*.

Fried whole plants are edible.

Duchesnea indica (Andrews) Focke [Rosaceae] (Plate VI, Fig. F).

Vernacular Name: *Gorai Bidai* (Mech); Exscicattus: *Ajita & AP Das 134*.

Ripe fruits are edible.

Ehretia serrata Roxburgh [Ehretiaceae]

Vernacular Name: *Larlaria* (Mech); Exscicattus: *Ajita & AP Das 126*.

Ripe fruits are edible.

Eichhornia crassipes (Martius) Solms [Pontederiaceae] (Plate VI, Fig. G).

Vernacular Name: *Pana* (Mech); Exscicattus: *Ajita & AP Das 158*.

Fried flowers are edible.

Elaeocarpus floribundus Blume [Elaeocarpaceae]

Vernacular Name: *Jalpoi* (Mech); Exscicattus: *Ajita & AP Das 040*.

Fruits are eaten raw and used for the preparation of pickle.

Enydra fluctuans Loureiro [Asteraceae] (Plate VI, Fig. H).

Vernacular Name: *Hela* (Mech); Exscicattus: *Ajita & AP Das 431*.

Leaves and stalks are cooked as vegetables.

Euphorbia hirta Linnaeus [Euphorbiaceae]

Vernacular Name: *Dudhali* (Mech); Exscicattus: *Ajita & AP Das 311*.

Leaves are cooked as vegetables.

Ficus hispida Linnaeus f. [Moraceae] (Plate VII, Fig. A).

Vernacular Name: *Adumri*; Exscicattus: *Ajita & AP Das 028*.

Young fruits are cooked as vegetables. Ripe fruits are edible.

Flacourtia jangomas (Loureiro) Raeuschel [Flacourtiaceae]

Vernacular Name: *Dongkhur* (Mech); Exscicattus: *Ajita & AP Das 284*.

Ripe fruits are eaten raw.

Glinus oppositifolius (Linnaeus) A. DC. [Molluginaceae]

Vernacular Name: *Ghima Bilai* (Mech); Exscicattus: *Ajita & AP Das 186*.

Whole plants are cooked as vegetable.

Glycosmis pentaphylla (Retzius) DC. [Rutaceae]

Vernacular Name: *Motra* (Mech); Exscicattus: *Ajita & AP Das 236*.

Ripe fruits are eaten.

Gmelina arborea Roxburgh [Verbenaceae] (Plate VII, Fig. B).

Vernacular Name: *Gambri* (Mech); Exscicattus: *Ajita & AP Das 459*.

Flowers are fried and eaten.

Grewia asiatica Linnaeus [Tiliaceae]

Vernacular Name: *Phalasa Fithai* (Mech); Exscicattus: *Ajita & AP Das 470*.

Ripe fruits are edible.

Grewia serrulata DC. [Tiliaceae]

Vernacular Name: *Hagrani Fithai* (Mech); Exscicattus: *Ajita & AP Das 168*.

Ripe fruits are eaten raw.

Helminthostachys zeylanica (Linnaeus) Hooker [Helminthostachyaceae] (Plate VII, Fig. C).

Vernacular Name: *Daudai Atheng* (Mech); Exscicattus: *Ajita & AP Das 216*.

Petioles and young tender leaves are cooked as vegetables.

Hibiscus sabdariffa Linnaeus [Malvaceae]

Vernacular Name: *Mistha Bingfang* (Mech); Exscicattus: *Ajita & AP Das 249*.

Calyx is eaten raw.

Houttuynia cordata Thunberg [Saururaceae] (Plate VII, Fig. D).

Vernacular Name: *Maisundri* (Mech); Exscicattus: *Ajita & AP Das 070*.

Young leaves are pounded with onion, green chilli and ginger and consumed as pickle.

Hygrophila auriculata (Schumacher) Heine [Acanthaceae] (Plate VII, Fig. E).

Vernacular Name: *Boikhara* (Mech); Exscicattus: *Ajita & AP Das 250*.

Young leaves are cooked as vegetables.

Ipomoea aquatica Forsskal [Convolvulaceae] (Plate VII, Fig. F).
Vernacular Name: *Khalmi* (Mech); Exscicattus: *Ajita & AP Das 079*.
Young shoots are cooked as vegetables.

Lagenaria siceraria (Molina) Standley [Cucurbitaceae]
Vernacular Name: *Kaila Khaka* (Mech); Exscicattus: *Ajita & AP Das 160*.
Fried young fruits are eaten.

Lasia spinosa (Linnaeus) Thwaites [Araceae] (Plate VII, Fig. G).
Vernacular Name: *Sibru* (Mech); Exscicattus: *Ajita & AP Das 113*.
Fried petioles are eaten.

Leucas indica (Linnaeus) R. Brown ex Vatke [Lamiaceae]
Vernacular Name: *Khansisa* (Mech); Exscicattus: *Ajita & AP Das 089*.
Young shoots are cooked as vegetables.

Lippia javanica (Burman f.) Sprengel [Verbenaceae]
Vernacular Name: *Anthai Bazab* (Mech); Exscicattus: *Ajita & AP Das 125*.
Young fried leaves are eaten and raw leaves are added in curry as aromatic.

Luffa aegyptica Miller [Cucurbitaceae]
Vernacular Name: *Falla* (Mech); Exscicattus: *Ajita & AP Das 412*.
Young green fruits are fried and eaten.

Manihot esculenta Crantz [Euphorbiaceae]
Vernacular Name: *Thasumbly* (Mech); Exscicattus: *Ajita & AP Das 084*.
Boiled roots are eaten.

Marsilea minuta Linnaeus [Marsileaceae] (Plate VII, Fig. H).
Vernacular Name: *Sususni* (Mech); Exscicattus: *Ajita & AP Das 190*.
Fried leaves are edible.

Melastoma malabathricum Linnaeus [Melastomataceae] (Plate VIII, Fig. A).
Vernacular Name: *Daukhiboi* (Mech); Exscicattus: *Ajita & AP Das 080*.
Ripe seed is edible.

Melia azedarach Linnaeus [Meliaceae]
Vernacular Name: *Neem Gadar* (Mech); Exscicattus: *Ajita & AP Das 027*.
Fried young leaves are eaten.

Mimusops elengi Linnaeus [Sapotaceae] (Plate VIII, Fig. B).
Vernacular Name: *Baikhul* (Mech); Exscicattus: *Ajita & AP Das 165*.
Ripe fruits are edible.

Momordica charantia Linnaeus [Cucurbitaceae]

Vernacular Name: *Udasi* (Mech); Exscicattus: *Ajita & AP Das 228*.

Young fruits and leaves are cooked as vegetables.

Momordica dioica Roxburgh ex Willdenow [Cucurbitaceae]

Vernacular Name: *Aamkhora* (Mech); Exscicattus: *Ajita & AP Das 235*.

Young fruits are cooked as vegetables.

Monochoria vaginalis (Burman f.) C. Presl. ex Kunth [Pontederiaceae]

Vernacular Name: *Pana* (Mech); Exscicattus: *Ajita & AP Das 468*.

Fried petioles are edible.

Moringa oleifera Lamarck [Moringaceae]

Vernacular Name: *Sajna* (Mech); Exscicattus: *Ajita & AP Das 041*.

Young green pods are cooked as vegetable and mature pods are cooked with dal. Young fried leaves are consumed as vegetable.

Morus australis Poirer [Moraceae]

Vernacular Name: *Thaikhong Chef* (Mech); Exscicattus: *Ajita & AP Das 457*.

Ripe fruits are edible.

Mukia maderaspatana (Linnaeus) M. J. Roemer [Cucurbitaceae]

Vernacular Name: *Kundri* (Mech); Exscicattus: *Ajita & AP Das 163*.

Young fruits are cooked as vegetable.

Murraya koenigii (Linnaeus) Sprengel [Rutaceae]

Vernacular Name: *Jafsri Bilai* (Mech); Exscicattus: *Ajita & AP Das 135*.

Ripe fruits are eaten by children.

Musa balbisiana Colla [Musaceae]

Vernacular Name: *Athia Thalith* (Mech); Exscicattus: *Ajita & AP Das 251*.

Young and matured fruits are consumed as vegetable and pseudostems are cooked with meat.

Mussaenda glabra Vahl [Rubiaceae]

Vernacular Name: *Kotmotia* (Mech); Exscicattus: *Ajita & AP Das 193*.

Young fried leaves are edible.

Mussaenda roxburghii Hooker f. [Rubiaceae]

Vernacular Name: *Kotmotia* (Mech); Exscicattus: *Ajita & AP Das 192*.

Young leaves are boiled in rice and eaten.

Neolamarckia cadamba (Roxburgh) J. Bosser [Rubiaceae]

Vernacular Name: *Khadam* (Mech); Exscicattus: *Ajita & AP Das 230*.

Ripe fruits are edible.

Nymphaea pubescens Willdenow [Nymphaeaceae]

Vernacular Name: *Daeii Bibar* (Mech); Exscicattus: *Ajita & AP Das 187*.

Fried petioles are edible.

Oldenlandia corymbosa Linnaeus [Rubiaceae]

Vernacular Name: *Hagrani Bilai* (Mech); Exscicattus: *Ajita & AP Das 233*.

Fried whole plants are eaten.

Oroxylum indicum (Linnaeus) Bentham ex Kurz [Bignoniaceae]

Vernacular Name: *Kharo Khandai* (Mech); Exscicattus: *Ajita & AP Das 044*.

Bitter flowers and tender shoots are soaked in hot water and fried in oil and eaten.

Oxalis corniculata Linnaeus [Oxalidaceae]

Vernacular Name: *Shimpli* (Mech); Exscicattus: *Ajita & AP Das 112*.

Raw leaves are crushed with green chilli and salt and consumed as prickle.

Oxalis corymbosa DC. [Oxalidaceae]

Vernacular Name: *Shimpli Gedet* (Mech); Exscicattus: *Ajita & AP Das 270*.

Bulbs are eaten raw.

Paederia foetida Linnaeus [Rubiaceae]

Vernacular Name: *Khipi Bindong* (Mech); Exscicattus: *Ajita & AP Das 364*.

Young fried leaves are edible.

Phlogacanthus thyrsoformis (Hardwicke) Mabberley [Acanthaceae]

Vernacular Name: *Chinchingri Khala* (Mech); Exscicattus: *Ajita & AP Das 082*.

Fried flowers are eaten.

Phyllanthus emblica Linnaeus [Euphorbiaceae]

Vernacular Name: *Amlakhi* (Mech); Exscicattus: *Ajita & AP Das 034*.

Fruits are eaten raw and also pickled.

Physalis divaricata D. Don [Solanaceae] (Plate VIII, Fig. C).

Vernacular Name: *Ganga Thopfa* (Mech); Exscicattus: *Ajita & AP Das 133*.

Ripe fruits are eaten.

Piper betle Linnaeus [Piperaceae]

Vernacular Name: *Phatai* (Mech); Exscicattus: *Ajita & AP Das 114*.

Leaves are eaten with the nut of *Areca catechu*.

Piper nigrum Linnaeus [Piperaceae]

Vernacular Name: *Banjut* (Mech); Exscicattus: *Ajita & AP Das 272*.

Dried fruit is eaten as condiment.

Piper sylvaticum Roxburgh [Piperaceae]

Vernacular Name: *Hagrani Phatai* (Mech); Exscicattus: *Ajita & AP Das 128*.

Leaves are eaten with the nut of *Areca catechu*.

Polycarpon prostratum (Forsskal) Ascherson & Schweinfurth [Caryophyllaceae] (Plate VIII, Fig. D).

Vernacular Name: *Hagrani Bilai* (Mech); Exscicattus: *Ajita & AP Das 261*.

Whole plants are eaten.

Polygonum plebeium R. Brown [Polygonaceae].

Vernacular Name: *Daunasi* (Mech); Exscicattus: *Ajita & AP Das 119*.

Whole plants are cooked as vegetables.

Portulaca oleracea Linnaeus [Portulacaceae] (Plate VIII, Fig. E).

Vernacular Name: *Hangsaramai* (Mech); Exscicattus: *Ajita & AP Das 456*.

Whole plants are cooked as vegetables.

Premna bengalensis Clarke [Verbenaceae]

Vernacular Name: *Babol* (Mech); Exscicattus: *Ajita & AP Das 271*.

Fried young leaves are eaten.

Solanum anguivi Lamarck [Solanaceae]

Vernacular Name: *Khunthai* (Mech); Exscicattus: *Ajita & AP Das 161*.

Both young and matured fried fruits are edible.

Solanum nigrum Linnaeus [Solanaceae] (Plate VIII, Fig. F).

Vernacular Name: *Moisung* (Mech); Exscicattus: *Ajita & AP Das 122*.

Ripe fruits and fried leaves are eaten.

Solanum torvum Swartz [Solanaceae] (Plate VIII, Fig. G).

Vernacular Name: *Khunthai Raja* (Mech); Exscicattus: *Ajita & AP Das 450*.

Young and mature fried fruits are edible.

Spondias pinnata (Linnaeus f.) Kurz [Anacardiaceae]

Vernacular Name: *Thaischchip* (Mech); Exscicattus: *Ajita & AP Das 226*.

Ripe fruits are eaten.

Stellaria wallichiana Bentham ex Haines [Caryophyllaceae]

Vernacular Name: *Daubibu* (Mech); Exscicattus: *Ajita & AP Das 299*.

Fried whole plants are eaten.

Sterculia villosa Roxburgh [Sterculiaceae]

Vernacular Name: *Odlā* (Mech); Exscicattus: *Ajita & AP Das 045*.

Fried seeds are eaten.

Syzygium cumini (Linnaeus) Skeels [Myrtaceae]

Vernacular Name: *Jham* (Mech); Exscicattus: *Ajita & AP Das 023*.

Ripe fruits are edible.

Tamarindus indica Linnaeus [Caesalpiniaceae]

Vernacular Name: *Titli* (Mech); Exscicattus: *Ajita & AP Das 025*.

Ripe fruits are eaten raw and used for preparing pickles.

Terminalia bellirica (Gaertner) Roxburgh [Combretaceae]

Vernacular Name: *Bhaora* (Mech); Exscicattus: *Ajita & AP Das 024*.

Embryo is eaten raw.

Trapa natans Linnaeus var. *bispinosa* (Roxburgh) Makino [Trapaceae]

Vernacular Name: *Daie Fithai* (Mech); Exscicattus: *Ajita & AP Das 185*.

Fruits are edible.

Typhonium trilobatum (Linnaeus) Schott [Araceae] (Plate VIII, Fig. H).

Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 157*.

Young leaves are pounded with green chilli and salt and eaten as pickle.

Vitex negundo Linnaeus [Verbenaceae]

Vernacular Name: *Nisindou* (Mech); Exscicattus: *Ajita & AP Das 182*.

Fried young leaves are edible.

Xanthosoma brasiliense (Desfontaines) Engler [Araceae]

Vernacular Name: *Dudhali Thadung* (Mech); Exscicattus: *Ajita & AP Das 051*.

Fried petiole is eaten.

Zehneria japonica (Thunberg) H.Y. Liu [Cucurbitaceae]

Vernacular Name: *Hagrani Phatol* (Mech); Exscicattus: *Ajita & AP Das 422*.

Young fried fruits are eaten.

Zingiber officinale Roscoe [Zingiberaceae]

Vernacular Name: *Adi* (Mech); Exscicattus: *Ajita & AP Das 252*.

Rhizome is edible.

Zizyphus mauritiana Lamarck [Rhamnaceae]

Vernacular Name: *Boi* (Mech); Exscicattus: *Ajita & AP Das 150*.

Ripe fruits are eaten.

7.1.2. DISCUSSION

Plants are eaten mainly in two ways, cooked or uncooked. While plants are eaten cooked then those are generally referred as 'vegetable'. On the other hand, there is no such overall terminology for those which are eaten uncooked.

7.1.2.1. Vegetables

As much as 81 species of plants are used as vegetable and are eaten after cooking.

A. Leafy Vegetable: Only leaves of these plants are used as vegetable in their different stages of maturity. A high number of 45 species (covering 40 genera and 29 families) are recognized under this category.

i. Very young leaves: *Diplazium esculentum* and *Helminthostachys zeylanica*.

ii. Young leaves: *Amaranthus lividus*, *Amaranthus spinosus*, *Amaranthus viridis*, *Cassia occidentalis*, *Cissus repens*, *Colocasia esculenta*, *Deeringia amaranthoides*, *Hygrophila auriculata*, *Ipomoea aquatica*, *Leucas indica*, *Lippia javanica*, *Melia azedarach*, *Moringa oleifera*, *Mussaenda glabra*, *Mussaenda roxburghii*, *Oroxylum indicum*, *Paederia foetida*, *Premna bengalensis*, *Typhonium trilobatum*, *Vitex negundo*.

iii. Young & mature leaves: *Acmella calva*, *Alternanthera philoxeroides*, *Alternanthera paronichioides*, *Alternanthera sessilis*, *Azadirachta indica*, *Bacopa monnieri*, *Boerhavia coccinea*, *Centella asiatica*, *Chenopodium album*, *Coccinia grandis*, *Commelina benghalensis*, *Corchorus capsularis*, *Drymaria cordata*, *Enhydra fluctuans*, *Euphorbia hirta*, *Glinus oppositifolius*, *Marsilea minuta*, *Momordica charantia*, *Oldenlandia corymbosa*, *Polycarpon prostratum*, *Polygonum plebeium*, *Portulaca oleracea*, *Solanum nigrum*, *Stellaria wallichiana*.

B. Petiole Vegetable: In some plants entire leaf is not eaten. In plants like *Alocasia macrorrhizos*, *Colocasia esculenta*, *Lasia spinosa*, *Nymphaea pubescens*, *Helminthostachys zeylanica*, *Monochoria vaginalis* and *Xanthosoma brasiliense* only the petiole is collected for cooking. Six angiospermic species (of 6 genera and 3 families) and one pteridophyte (*Helminthostachys zeylanica*) are recognized for this category.

C. Leaf-Sheath/ Pseudostem as vegetable: In a pseudostem inner sheaths are generally soft and Mech people use those at least of four species from 4 genera in 4 families. These are *Musa balbisiana*, *Costus speciosus*, *Alpinia nigra* and *Calamus erectus*. Out of these only first species is under cultivation and the populations of last two are decreasing quickly.

D. Root-tuber vegetable: Large fleshy root-stocks of different species of *Dioscorea* is one preferred food in numerous communities specially in the tropics. During four of its species (*D. bulbifera*, *D. esculenta*, *D. pentaphylla* and *D. pubera*) were recorded to consume by Meches. *Amorphophallus bulbifer* (Araceae) is also available in local forests and is also a favored vegetable. In addition, one exotic plant of Euphorbiaceae, *Manihot esculenta*, is also largely consumed by them.

E. Rhizome vegetable: In addition to root-tubers, 2 species of aroids *Alocasia macrorrhizos* and *Colocasia esculenta*, are also much favoured food. These two are semi-cultivated plants.

F. Flower/ Inflorescence vegetable: Flowers of seven dicotyledonous (*Bauhinia purpurea*, *Bauhinia variegata*, *Carica papaya*, *Gmelina arborea*, *Moringa oleifera*, *Oroxylum indicum* and *Phlogacanthus thyrsoformis*) and three monocotyledonous (*Colocasia esculenta*, *Eichhornia crassipes* and *Musa balbisiana*) plants (from 8 genera and 8 families) are use as vegetable in *Mech* kitchens. Apart from *Eichhornia crassipes* and *Musa balbisiana*, the flowering period of seven other plants are quite restricted and of different availability status.

G. Fruit vegetable: Fruits of these plants are eaten only after cooking. 15 species of plants covering 13 genera and 5 families are recognized for this category. Like leaves, fruits are also used in different stages of maturity. However, there are some personal preferences too.

i. Young fruits: *Artocarpus heterophyllus*, *Citrullus lanatus*, *Coccinia grandis*, *Diplocyclos palmatus*, *Ficus hispida*, *Lagenaria siceraria*, *Luffa aegyptica*, *Momordica charantia*, *Momordica dioica*, *Mukia maderaspatana*, *Zehneria japonica*.

ii. Young & matured fruits: *Moringa oleifera*, *Musa balbisiana*, *Solanum anguivi*, *Solanum torvum*.

H. Seed vegetable: The seeds of *Odal* (*Sterculia villosa*) is also used for different types of preparations.

I. Spices & Condiments: Rhizomes of *Curcuma longa* and *Zingiber officinale* and the fruits of *Piper nigrum* are regularly used as spices and condiments.

J. Aromatic plants: Leaves of *Lippia javanica* are used for their aroma. Raw matured leaves are added with meat curry.

K. Pickle: Young primary shoot of *Bambusa nutans*, acrescent calyx of *Dillenia indica* and the fruits of *Elaeocarpus floribundus*, *Zizyphus mauritiana*, *Phyllanthus emblica* and *Spondias pinnata* are commonly used by *Meches* for the preparation of pickles.

7.1.2.2. Eaten Raw: There are many plants or plant parts those are eaten raw by the *Mech* people.

A. Fruits: Green and/or ripe fruits of 34 species covering 30 genera and 23 families are recorded to eat by *Mech* people without cooking. Such plants can be grouped as follows: *Aegle marmelos*, *Annona reticulata*, *Ardisia solanacea*, *Artocarpus chama*, *Artocarpus heterophyllus*, *Artocarpus lacucha*,

Baccaurea ramiflora, *Calamus erectus*, *Citrullus lanatus*, *Citrus limon*, *Dillenia indica*, *Dillenia pentagyna*, *Diospyros malabarica*, *Duchesnea indica*, *Ehretia serrata*, *Elaeocarpus floribundus*, *Ficus hispida*, *Flacourtia jangomas*, *Glycosmis pentaphylla*, *Grewia asiatica*, *Grewia serrulata*, *Mimusops elengi*, *Morus australis*, *Murraya koenigii*, *Musa balbisiana*, *Neolamarckia cadamba*, *Phyllanthus emblica*, *Physalis divaricata*, *Solanum nigrum*, *Spondias pinnata*, *Syzygium cumini*, *Tamarindus indica*, *Trapa natans*, *Zizyphus mauritiana*.

B. Leaves: Leaves of five species of 4 genera and 4 families (*Cannabis sativa*, *Hottuynia cordata*, *Oxalis corniculata*, *Piper betle* and *Piper sylvaticum*) are eaten raw. While leaves of *Hottuynia cordata* and *Oxalis corniculata* are made into 'chatni' (deserts) and taken along with other food; the leaves of *Piper betle* and *P. sylvaticum* are used as masticator. However, the leaves of *Cannabis sativa* is hallucinogenic.

C. Bulb: The underground bulbs of *Oxalis corymbosa* are eaten raw by children.

D. Seed: Seeds of *Melastoma malabathricum* are chewed aggressively by children. This also stains their teeth deep-purple.

E. Embryo: Embryos of *Terminalia bellirica* are collected by breaking the seeds and eaten raw. It tastes like the same of *Terminalia catappa*.

F. Calyx: The persistent calyx of *Hibiscus sabdariffa* is crescent, succulent and sour. It is made into pickles, cooked into tasty sour curry and also eaten raw.

G. Sap of stem: While moving inside the forests during dry season they cut the thick lianas stem of *Cissus simplex* that yields some amount watery sap which helps them to quench their thirst.

7.1.2.3. Classifications of Edible Parts: All parts of all plants are not edible. And, that is clear from the above discussion. Man has recognized edible part of different plants through trial and error method. It is true for the *Mech* community too. Following is an account of edible parts for different plants eaten by them.

A. Whole plants/ Leafy shoots: *Acmella calva*, *Alternanthera philoxeroides*, *Alternanthera paronichioides*, *Alternanthera sessilis*, *Amaranthus lividus*, *Amaranthus spinosus*, *Amaranthus viridis*, *Boerhavia coccinea*, *Bacopa monnieri*, *Centella asiatica*, *Chenopodium album*, *Commelina benghalensis*, *Deeringia amaranthoides*, *Drymaria cordata*, *Enhydra fluctuans*, *Glinus oppositifolius*, *Ipomoea*

aquatica, Leucas indica, Oldenlandia corymbosa, Oroxylum indicum, Polycarpon prostratum, Polygonum plebeium, Portulaca oleracea, Stellaria wallichiana [24 species, 20 genera, 15 families]

B. Leaves: 25 species, 23 genera, 17 families. *Azadirachta indica, Cannabis sativa, Cassia occidentalis, Cissus repens, Coccinia grandis, Colocasia esculenta, Corchorus capsularis, Diplazium esculentum, Euphorbia hirta, Helminthostachys zeylanica, Houttuynia cordata, Hygrophila auriculata, Lippia javanica, Marsilea minuta, Melia azedarach, Momordica charantia, Moringa oleifera, Mussaenda glabra, Mussaenda roxburghii, Oxalis corniculata, Paederia foetida, Piper betle, Piper sylvaticum, Premna bengalensis, Solanum nigrum, Typhonium trilobatum, Vitex negundo.*

C. Fruits: 45 species, 38 genera, 24 families [*Aegle marmelos, Annona reticulata, Ardisia solanacea, Artocarpus chama, Artocarpus heterophylla, Artocarpus lacucha, Baccaurea ramiflora, Calamus erectus, Citrullus lanatus, Citrus limon, Coccinia grandis, Dillenia indica, Dillenia pentagyna, Diospyros malabarica, Diplocyclos palmatus, Duchesnea indica, Ehretia serrata, Elaeocarpus floribundus, Ficus hispida, Flacourtia jangomas, Glycosmis pentaphylla, Grewia asiatica, Grewia serrulata, Lagenaria siceraria, Luffa aegyptica, Mimusops elengi, Momordica charantia, Momordica dioica, Moringa oleifera, Morus australis, Mukia maderaspatana, Murraya koenigii, Musa balbisiana, Neolamarckia cadamba, Phyllanthus emblica, Physalis divaricata, Solanum anguivi, Solanum nigrum, Solanum torvum, Spondias pinnata, Syzygium cumini, Tamarindus indica, Trapa natans, Zehneria japonica, Zizyphus mauritiana*].

D. Flowers/Calyx/Inflorescence: 11 species, 10 genera, 10 families [*Bauhinia purpurea, Bauhinia variegata, Carica papaya, Colocasia esculenta, Eichhornia crassipes, Gmelina arborea, Hibiscus sabdariffa, Moringa oleifera, Oroxylum indicum, Phlogacanthus thyriformis* and *Musa balbisiana*].

E. Seeds: 2 species, 2 genera, 2 families [*Melastoma malabathricum, Sterculia villosa*].

F. Embryos: *Terminalia bellirica*

G. Sap of stem: *Cissus simplex*

7.1.2.4. Classification of Habit Groups: The vegetation in this region is mainly forested. There are plants of all habit groups grow in such vegetations. Analysis of habit groups shows that there is wide diversity of habits.

A. Trees: 34 species, 29 genera, 23 families [*Aegle marmelos*, *Annona reticulata*, *Artocarpus chama*, *Artocarpus heterophyllus*, *Artocarpus lacucha*, *Azadirachta indica*, *Baccaurea ramiflora*, *Bambusa nutans*, *Bauhinia purpurea*, *Bauhinia variegata*, *Dillenia indica*, *Dillenia pentagyna*, *Diospyros malabarica*, *Ehretia serrata*, *Elaeocarpus floribundus*, *Ficus hispida*, *Flacourtia jangomas*, *Gmelina arborea*, *Grewia asiatica*, *Grewia serrulata*, *Melia azedarach*, *Mimusops elengi*, *Moringa oleifera*, *Morus australis*, *Neolamarckia cadamba*, *Oroxylum indicum*, *Phyllanthus emblica*, *Premna bengalensis*, *Spondias pinnata*, *Sterculia villosa*, *Syzygium cumini*, *Tamarindus indica*, *Terminalia bellirica*, *Zizyphus mauritiana*].

B. Shrub: 19 species, 17 genera, 14 families [*Ardisia solanacea*, *Calamus erectus*, *Cannabis sativa*, *Carica papaya*, *Cassia occidentalis*, *Citrus limon*, *Deeringia amaranthoides*, *Glycosmis pentaphylla*, *Hibiscus sabdariffa*, *Lippia javanica*, *Manihot esculenta*, *Melastoma malabathricum*, *Murraya koenigii*, *Mussaenda glabra*, *Mussaenda roxburghii*, *Phlogacanthus thyrsoformis*, *Solanum anguivi*, *Solanum torvum*, *Vitex negundo*].

C. Herb: 46 species, 41 genera, 28 families [*Acmella calva*, *Alocasia macrorrhizos*, *Alpinia nigra*, *Alternanthera philoxeroides*, *Alternanthera paronichioides*, *Alternanthera sessilis*, *Amaranthus lividus*, *Amaranthus spinosus*, *Amaranthus viridis*, *Amorphophallus bulbifer*, *Bacopa monnieri*, *Boerhavia coccinea*, *Centella asiatica*, *Chenopodium album*, *Colocasia esculenta*, *Commelina benghalensis*, *Corchorus capsularis*, *Costus speciosus*, *Curcuma longa*, *Drymaria cordata*, *Duchesnea indica*, *Eichhornia crassipes*, *Enhydra fluctuans*, *Euphorbia hirta*, *Glinus oppositifolius*, *Houttuynia cordata*, *Hygrophila auriculata*, *Ipomoea aquatica*, *Lasia spinosa*, *Leucas indica*, *Monochoria vaginalis*, *Musa balbisiana*, *Nymphaea pubescens*, *Oldenlandia corymbosa*, *Oxalis corniculata*, *Oxalis corymbosa*, *Physalis divaricata*, *Polycarpon prostratum*, *Polygonum plebeium*, *Portulaca oleracea*, *Solanum nigrum*, *Stellaria wallichiana*, *Trapa natans*, *Typhonium trilobatum*, *Xanthosoma brasiliense*, *Zingiber officinale*].

D. Climber: 19 species, 12 genera, 5 families [*Cissus repens*, *Cissus simplex*, *Citrullus lanatus*, *Coccinia grandis*, *Dioscorea bulbifera*, *Dioscorea esculenta*, *Dioscorea pentaphylla*, *Dioscorea pubera*, *Diplocyclos palmatus*, *Lagenaria siceraria*, *Luffa aegyptica*, *Momordica charantia*, *Momordica dioica*, *Mukia maderaspatana*, *Paederia foetida*, *Piper betle*, *Piper nigrum*, *Piper sylvaticum*, *Zehneria japonica*].

E. Geophytes: Also there are geophytic plants. Those are *Alocasia macrorrhizos*, *Alpinia nigra*, *Amorphophallus bulbifer*, *Colocasia esculenta*, *Costus speciosus*, *Curcuma longa*, *Lasia spinosa*, *Musa balbisiana*, *Nymphaea pubescens*, *Oxalis corymbosa*, *Trapa natans*, *Typhonium trilobatum*, *Xanthosoma brasiliense* and *Zingiber officinale*

F. Pteridophyte: 3species, 3 genera, 3 families [*Diplazium esculentum*, *Helminthostachys zeylanica*, *Marsilea minuta*].

7.1.2.5. Marketability of Edible Plants:

If the demand for a plant is high in the society and if it becomes difficult for many people to collect from the vegetation, in that case some other people will try to put it on sale in the market. 35 species, 31 genera, 24 families. *Aegle marmelos*, *Alocasia macrorrhizos*, *Amaranthus spinosus*, *Amorphophallus bulbifer*, *Annona reticulata*, *Artocarpus heterophyllus*, *Azadirachta indica*, *Centella asiatica*, *Chenopodium album*, *Citrus limon*, *Coccinia grandis*, *Colocasia esculenta*, *Corchorus capsularis*, *Curcuma longa*, *Dillenia indica*, *Dioscorea bulbifera*, *Dioscorea esculenta*, *Dioscorea pentaphylla*, *Dioscorea pubera*, *Diplazium esculentum*, *Ficus hispida*, *Gmelina arborea*, *Hygrophila auriculata*, *Ipomoea aquatic*, *Luffa aegyptica*, *Manihot esculenta*, *Momordica charantia*, *Moringa oleifera*, *Musa balbisiana*, *Nymphaea pubescens*, *Phyllanthus emblica*, *Piper betle*, *Piper nigrum*, *Syzygium cumini*, *Tamarindus indica*, *Trapa natans*, *Typhonium trilobatum*, *Zingiber officinale*, *Zizyphus mauritiana*.

The above account reflects that *Meches* living in forest-villages or in fringe areas need not to go the market for the purchase of majority of cultivated plants. Again, slowly, some of these plants are preferred by urban people.

PLATE VI



Figs. A. *Baccaurea ramiflora*, B. *Coccinia grandis*,
C. *Colocasia esculenta*, D. *Commelina benghalensis*,
E. *Drymaria cordata*, F. *Duchesnea indica*,
G. *Eichhornia crassipes*, H. *Enhydra fluctuans*

PLATE VII



Figs. A. *Ficus hispida*, B. *Gmelina arborea*,
C. *Helminthostachys zeylanica*, D. *Houttuynia cordata*,
E. *Hygrophila auriculata*, F. *Ipomoea aquatica*,
G. *Lasia spinosa*, H. *Marsilea minuta*

PLATE VIII



Figs. A. *Melastoma malabathricum*, B. *Mimusops elengi*,
C. *Physalis divaricata*, D. *Polycarpon prostratum*,
E. *Portulaca oleracea*, F. *Solanum nigrum*,
G. *Solanum torvum*, H. *Typhonium trilobatum*

7.2. Recorded Fodder Plants

7.2.1. ENUMERATION OF RECORDED FODDER PLANTS

A total of 61 species of plants covering 52 genera from 28 families have been recorded to use as fodder for their domestic cows, buffalos and goats. But, when these animals are allowed to graze openly outside then they consume much larger number of plants. However, through the screening of their collected fodder in different seasons following plants have been recognized.

Achyranthes bidentata Blume [Amaranthaceae]

Vernacular Name: *Aran-dandali Bilai* (Mech); Exscicattus: *Ajita & AP Das 416, 426.*

Leafy shoots are fodder for cows.

Acmella calva (DC.) Jansen [Asteraceae]

Vernacular Name: *Usumai* (Mech); Exscicattus: *Ajita & AP Das 313.*

Whole plant is eaten by pigs.

Aegle marmelos (Linnaeus) Correa [Rutaceae]

Vernacular Name: *Bel Bingfang* (Mech); Exscicattus: *Ajita & AP Das 042.*

Leaves are used as cattle feed.

Alocasia macrorrhizos (Linnaeus) G. Don [Araceae]

Vernacular Name: *Mana Thadung* (Mech); Exscicattus: *Ajita & AP Das 322.*

Whole plant and rhizomes are eaten by pigs.

Alstonia scholaris (Linnaeus) R. Brown [Apocynaceae]

Vernacular Name: *Sithaona* (Mech); Exscicattus: *Ajita & AP Das 417.*

Leaves are cattle-feed.

Alternanthera sessilis (Linnaeus) R. Brown ex DC. [Amaranthaceae]

Vernacular Name: *Nunni* (Mech); Exscicattus: *Ajita & AP Das 300.*

Whole plant is cattle-fodder.

Amaranthus lividus Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 274.*

Whole plant is used as cattle fodder.

Amaranthus spinosus Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 429.*

Shoots are good source of fodder for the cow.

Amaranthus viridis Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 275, 428.*

Whole plant is eaten by cattle.

Amorphophallus bulbifer (Roxburgh) Blume [Araceae]

Vernacular Name: *Tha Thadung* (Mech); Exscicattus: *Ajita & AP Das 081.*

Whole plant is used as fodder for pig.

Annona reticulata Linnaeus [Annonaceae]

Vernacular Name: *Balam Fithai* (Mech); Exscicattus: *Ajita & AP Das 253.*

Shoots and ripe fruits are eaten by cattle.

Artocarpus heterophyllus Lamarck [Moraceae]

Vernacular Name: *Khanthal* (Mech); Exscicattus: *Ajita & AP Das 285.*

Leaves are eaten by cows and goats; ripe fruits are eaten by cows.

Artocarpus lacucha Buchanon-Hamilton [Moraceae]

Vernacular Name: *Daoa* (Mech); Exscicattus: *Ajita & AP Das 170.*

Leaves and fruits are used as fodder.

Axonopus compressus (Swartz) P. Beauvois [Poaceae]

Vernacular Name: *Chhepti Gangse* (Mech); Exscicattus: *Ajita & AP Das 240.*

Whole plant is used as fodder for cows.

Baccaurea ramiflora Loureiro [Euphorbiaceae]

Vernacular Name: *Khusumai* (Mech); Exscicattus: *Ajita & AP Das 026.*

Leaves are eaten by cows and goats.

Bambusa nutans Wallich *ex* Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 286.*

Leaves are used as fodder.

Bambusa balcooa Roxburgh [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 287.*

Leaves are eaten by goats and cows.

Bidens pilosa Linnaeus [Asteraceae]

Vernacular Name: *Guphut Bibar* (Mech); Exscicattus: *Ajita & AP Das 304.*

Whole plants are eaten by pigs.

Boerhavia coccinea Miller [Nyctaginaceae]

Vernacular Name: *Punarnova* (Mech); Exscicattus: *Ajita & AP Das 218.*

Whole plant is fodder.

Chenopodium album Linnaeus [Chenopodiaceae]

Vernacular Name: *Bothhua* (Mech); Exscicattus: *Ajita & AP Das 298*.

Whole plant is cattle-fodder.

Colocasia esculenta (Linnaeus) Schott [Araceae]

Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 050*.

Whole plants are eaten by pigs.

Commelina benghalensis Linnaeus [Commelinaceae]

Vernacular Name: *Sanai Bibar* (Mech); Exscicattus: *Ajita & AP Das 319*.

Whole plant is cattle fodder.

Cynodon dactylon (Linnaeus) Persoon [Poaceae]

Vernacular Name: *Duba Gang-se* (Mech); Exscicattus: *Ajita & AP Das 288*.

Whole plant is used as fodder.

Cyperus pilosus Vahl [Cyperaceae]

Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 341*.

Whole plant is used as cattle feed.

Cyperus rotundus Linnaeus [Cyperaceae]

Vernacular Name: *Mutha Gang-se* (Mech); Exscicattus: *Ajita & AP Das 075*.

Whole plant is fodder.

Digitaria ciliaris (Retzius) Koeler [Poaceae]

Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 284*.

Whole plant is used as fodder.

Dillenia indica Linnaeus [Dilleniaceae]

Vernacular Name: *Thaidig* (Mech); Exscicattus: *Ajita & AP Das 022*.

Leaves are eaten by goats.

Dillenia pentagyna Roxburgh [Dilleniaceae]

Vernacular Name: *Rae Bingfang* (Mech); Exscicattus: *Ajita & AP Das 312*.

Leaves are cattle feed.

Diospyros malabarica (Desrousseaux) Kosteletsky [Ebenaceae]

Vernacular Name: *Gab Bingfang* (Mech); Exscicattus: *Ajita & AP Das 345*.

Tender shoots are fodder for goats.

Drymaria cordata (Linnaeus) Willdenow ex Roemer & Schultes [Caryophyllaceae]

Vernacular Name: *Barmadaree* (Mech); Exscicattus: *Ajita & AP Das 146*.

Whole plant is cattle-feed.

Eichhornia crassipes (Martius) Solms [Pontederiaceae].

Vernacular Name: *Pana* (Mech); Exscicattus: *Ajita & AP Das 158*.

Leaves are eaten by cow.

Elaeocarpus floribundus Blume [Elaeocarpaceae]

Vernacular Name: *Jalpoi* (Mech); Exscicattus: *Ajita & AP Das 040*.

Leaves are eaten by cows.

Enydra fluctuans Loureiro [Asteraceae]

Vernacular Name: *Hela* (Mech); Exscicattus: *Ajita & AP Das 431*.

Whole plant is used as fodder.

Eragrostis unioloides (Retzius) Nees ex Steudel [Poaceae]

Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 421*.

Whole plant is used as fodder.

Euphorbia hirta Linnaeus [Euphorbiaceae]

Vernacular Name: *Dudhali* (Mech); Exscicattus: *Ajita & AP Das 311*.

Shoots are cattle-feed.

Ficus benghalensis Linnaeus [Moraceae]

Vernacular Name: *Bhot* (Mech); Exscicattus: *Ajita & AP Das 336*.

Leaves are used as cattle feed.

Ficus hispida Linnaeus f. [Moraceae]

Vernacular Name: *Adumri* (Mech); Exscicattus: *Ajita & AP Das 028*.

Leaves are eaten by cows and goats; fruits are much liked by pigs.

Ficus religiosa Linnaeus [Moraceae]

Vernacular Name: *Asar* (Mech); Exscicattus: *Ajita & AP Das 282*.

Leaves are good fodder.

Gmelina arborea Roxburgh [Verbenaceae]

Vernacular Name: *Gambri* (Mech); Exscicattus: *Ajita & AP Das 359*.

Leaves and fruits are eaten by cows.

Imperata cylindrica (Linnaeus) Raeuschel [Poaceae]

Vernacular Name: *Thurmus* (Mech); Exscicattus: *Ajita & AP Das 281*.

Whole plant is used as fodder for cows.

Ipomoea aquatica Forsskål [Convolvulaceae]

Vernacular Name: *Khalmi* (Mech); Exscicattus: *Ajita & A.P. Das 360*.

Whole plant is fodder for cows.

Kyllinga nemoralis (J.R. & G. Forster) Dandy ex Hutchinson & Dalziel [Cyperaceae]

Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 342*.

Whole plant is eaten by cows and pigs.

Macaranga denticulata (Blume) Mueller [Euphorbiaceae]

Vernacular Name: *Laigajaou* (Mech); Exscicattus: *Ajita & AP Das 144*.

Leaves are used as fodder.

Mangifera indica Linnaeus [Anacardiaceae]

Vernacular Name: *Khaizou* (Mech); Exscicattus: *Ajita & AP Das 280*.

Leaves are cattle-feed.

Melia azedarach Linnaeus [Meliaceae]

Vernacular Name: *Neem Gadar* (Mech); Exscicattus: *Ajita & AP Das 303*.

Leaves and fruits are eaten by goats.

Mikania micrantha Kunth [Asteraceae]

Vernacular Name: *Rakkhasi Bindong* (Mech); Exscicattus: *Ajita & AP Das 035*.

Whole plant is fodder.

Moringa oleifera Lamarck [Moringaceae]

Vernacular Name: *Sajna* (Mech); Exscicattus: *Ajita & AP Das 041*.

Leaves are fodder.

Musa balbisiana Colla [Musaceae]

Vernacular Name: *Athia Thalit* (Mech); Exscicattus: *Ajita & AP Das 251*.

Leaves, fruits and pseudostems are eaten by cows and goats.

Neolamarckia cadamba (Roxburgh) Bossier [Rubiaceae]

Vernacular Name: *Khadam* (Mech); Exscicattus: *Ajita & AP Das 441*.

Leaves and fruits are used as fodder for cattle.

Oplismenus burmannii (Retzius) P. Beauvois [Poaceae]

Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 242*.

Shoots are used as fodder.

Oplismenus compositus (Linnaeus) P. Beauvois [Poaceae]

Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 418*.

Shoots are eaten by cows and goats.

Oroxylum indicum (Linnaeus) Bentham ex Kurz [Bignoniaceae]

Vernacular Name: *Kharo Khandai* (Mech); Exscicattus: *Ajita & AP Das 279*.

Leaves are eaten by cattle.

Persicaria chinensis (Linnaeus) H. Gross [Polygonaceae]
Vernacular Name: *Futkol* (Mech); Exscicattus: *Ajita & AP Das 278*.
Whole plant is used as fodder for cows.

Saccharum spontaneum Linnaeus [Poaceae]
Vernacular Name: *Gigab* (Mech); Exscicattus: *Ajita & AP Das 420*.
Leaves are cattle-feed.

Setaria palmifolia (Koenig) Stapf [Poaceae]
Vernacular Name: *Gang-se* (Mech); Exscicattus: *Ajita & AP Das 339*.
Whole plant is fodder.

Spermacocce latifolia Aublet [Rubiaceae]
Vernacular Name: *Hagrani Bilai* (Mech); Exscicattus: *Ajita & AP Das 340*.
Whole plant is used as fodder.

Streblus asper Loureiro [Moraceae]
Vernacular Name: *Seora Bingfang* (Mech); Exscicattus: *Ajita & AP Das 277*.
Leaves are used as fodder for goats.

Syzygium cumini (Linnaeus) Skeels [Myrtaceae]
Vernacular Name: *Jham* (Mech); Exscicattus: *Ajita & AP Das 023*.
Leaves are eaten by cattle.

Toona ciliata M. Roemer [Meliaceae]
Vernacular Name: *Tuni* (Mech); Exscicattus: *Ajita & AP Das 142*.
Leaves are fodder for cattle.

Typhonium trilobatum (Linnaeus) Schott [Araceae]
Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 365*.
Whole plants are eaten by pigs.

Xanthosoma brasiliense (Desfontaines) Engler [Araceae]
Vernacular Name: *Dudhali Thadung* (Mech); Exscicattus: *Ajita & AP Das 051*.
Whole plants are eaten by pigs.

7.2.2. DISCUSSION

Plants of diverse taxonomic and habit groups are used as fodder by *Meches* for their different domesticated herbivores.

7.2.2.1. Habit Groups: Out of the recorded 61 species, 25 are trees, 29 herbs including grasses and 1 species is climber (*Mikania micrantha*). Trees are *Aegle marmelos*, *Alstonia scholaris*, *Annona reticulata*,

Artocarpus heterophylla, *Artocarpus lacucha*, *Baccaurea ramiflora*, *Bambusa nutans*, *Bambusa balcooa*, *Dillenia indica*, *Dillenia pentagyna*, *Diospyros malabarica*, *Elaeocarpus floribundus*, *Ficus benghalensis*, *Ficus hispida*, *Ficus religiosa*, *Gmelina arborea*, *Macaranga denticulata*, *Mangifera indica*, *Melia azedarach*, *Moringa oleifera*, *Neolamarckia cadamba*, *Oroxylum indicum*, *Streblus asper*, *Syzygium cumini*, *Toona ciliata* belonging 16 families and herbs are *Achyranthes bidentata*, *Acmella calva*, *Alternanthera sessilis*, *Amaranthus lividus*, *Amaranthus spinosus*, *Amaranthus viridis*, *Axonopus compressus*, *Bidens pilosa*, *Boerhavia coccinea*, *Chenopodium album*, *Commelina benghalensis*, *Cynodon dactylon*, *Cyperus pilosus*, *Cyperus rotundus*, *Digitaria ciliaris*, *Drymaria cordata*, *Eichhornia crassipes*, *Enydra fluctuans*, *Eragrostis unioides*, *Euphorbia hirta*, *Imperata cylindrica*, *Ipomoea aquatica*, *Kyllinga nemoralis*, *Oplismenus burmannii*, *Oplismenus compositus*, *Persicaria chinensis*, *Saccharum spontaneum*, *Setaria palmifolia*, *Spermacoce latifolia*, under 14 families. Geophytes are 6 species belonging to 2 families i.e. *Alocasia macrorrhizos*, *Amorphophallus bulbifer*, *Colocasia esculenta*, *Musa balbisiana*, *Typhonium trilobatum*, *Xanthosoma brasiliense*.

7.2.2.2. Fodder Part of Plants: Only leaves are used as fodder from 27 plant species like *Aegle marmelos*, *Alstonia scholaris*, *Anona reticulata*, *Artocarpus heterophylla*, *Artocarpus lacucha*, *Baccaurea ramiflora*, *Bambusa nutans*, *Bambusa balcooa*, *Eichhornia crassipes*, *Elaeocarpus floribundus*, *Dillenia indica*, *Dillenia pentagyna*, *Ficus benghalensis*, *Ficus hispida*, *Ficus religiosa*, *Gmelina arborea*, *Macaranga denticulata*, *Mangifera indica*, *Melia azedarach*, *Moringa oleifera*, *Musa balbisiana*, *Neolamarckia cadamba*, *Oroxylum indicum*, *Saccharum spontaneum*, *Streblus asper*, *Syzygium cumini*, *Toona ciliata*. 28 species used as whole plant i.e. *Acmella calva*, *Alocasia macrorrhizos*, *Alternanthera sessilis*, *Amaranthus lividus*, *Amaranthus viridis*, *Amorphophallus bulbifer*, *Axonopus compressus*, *Bidens pilosa*, *Boerhavia coccinea*, *Chenopodium album*, *Colocasia esculenta*, *Commelina benghalensis*, *Cynodon dactylon*, *Cyperus pilosus*, *Cyperus rotundus*, *Digitaria ciliaris*, *Drymaria cordata*, *Enydra fluctuans*, *Eragrostis unioides*, *Imperata cylindrica*, *Ipomoea aquatica*, *Kyllinga nemoralis*, *Mikania micrantha*, *Persicaria chinensis*, *Setaria palmifolia*, *Spermacoce latifolia*, *Typhonium trilobatum*, *Xanthosoma brasiliense*. Leafy shoots of 7 species like *Achyranthes bidentata*, *Amaranthus spinosus*, *Annona reticulata*, *Diospyros malabarica*, *Euphorbia hirta*, *Oplismenus burmannii*, *Oplismenus composites* are collected as fodder for cattle. Ripe and unripe fruits of *Annona reticulata*, *Artocarpus heterophylla*, *Artocarpus lacucha*, *Ficus hispida*, *Gmelina arborea*, *Melia azedarach*, *Musa balbisiana*, *Neolamarckia cadamba* are collected for cows and pigs. Pseudostems of *Musa balbisiana* are also collected for cows. Along with such plants common grasses and sedges are also collected as fodder.

7.2.3. Conclusion

It is difficult to say that the list presented here is the complete list of fodder on which domestic animals generally brows. In fact, cows, buffaloes and goats brows on innumerable number of plants including cultivated ones when they are released for grazing during day-time. But, the presented list has been prepared from the fodder collected by people as supplementary food when animals are at home.

7.3. Recorded Plants for Domestic Uses

7.3.1. ENUMERATION OF RECORDED PLANTS FOR DOMESTIC USES

We need a wide array of materials for our survival. After oxygen, water and food, next important materials may include shelter/ house, dress, weapons for hunting and safety, equipments for fishing, de-husking of food-grains etc. All these are basic requirements for survival and human societies living in any corner of the planet need materials for such purposes.

People of *Mech* community is not the exception and during the present survey numerous such uses of plants has been recorded those may be grouped as 'Domestic Uses'. This chapter does not include plants used for religious, medicinal, edible, fodder, poisonous and decorative plants. However, plants of Domestic Uses are enumerated below along with their local names and uses.

Alangium chinense (Loureiro) Harms [Alangiaceae]

Vernacular Name: *Ban* (Mech); Exscicattus: *Ajita & AP Das 422*.

The wood is used as fuel.

Alstonia scholaris R. Brown [Apocynaceae]

Vernacular Name: *Sithaona* (Mech); Exscicattus: *Ajita & AP Das 030*.

The wood is used for making wooden sandal (*Nakthung*) and musical instrument (*Dotara*).

Barringtonia acutangula (Linnaeus) Gaertner [Lecythidaceae]

Vernacular Name: *Hijol Bingfang* (Mech); Exscicattus: *Ajita & AP Das 265*.

Children play with its fruits.

Bambusa nutans Wallich ex Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 012*.

Bamboo is used for making house, various fishing equipments, grain-sieving (*Chhandrai*), winnowing utensils (*Chhongrai*), water-storing cylinder, hunting equipments, musical instruments, playing sticks (*Phatka*) (Plate IX, Fig. A), etc.

Bambusa balcooa Roxburgh [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 439*.

Bamboo is used for making poles, thatching of roof, tool handles etc.

Bombax ceiba Linnaeus [Bombacaceae]

Vernacular Name: *Simul* (Mech); Exscicattus: *Ajita & AP Das 099*.

Floss is used for making pillow (*Gandu*).

Callicarpa arborea Roxburgh [Verbenaceae]

Vernacular Name: *Dhouli* (Mech); Exscicattus: *Ajita & AP Das 020*.

The wood is used for making furniture (*Ijeng Ila*).

Casearia graveolens Dalziel [Flacourtiaceae]

Vernacular Name: *Guti Fithai* (Mech); Exscicattus: *Ajita & AP Das 469*.

Children play with ripe fruits.

Cassia fistula Linnaeus [Caesalpiniaceae]

Vernacular Name: *Dindong* (Mech); Exscicattus: *Ajita & AP Das 413*.

Fruits are burnt and the ash is used for washing utensils.

Chukrasia tabularis A. Jussieu [Meliaceae]

Vernacular Name: *Chikrasi* (Mech); Exscicattus: *Ajita & AP Das 306*.

Timber is used for making house building materials.

Corchorus capsularis Linnaeus [Tiliaceae]

Vernacular Name: *Phatto* (Mech); Exscicattus: *Ajita & AP Das 258*.

Fiber is used for making rope (*Doudung*) (Plate IX, Fig. B) and jute stick (*Phatto-sheer-kha*) is used for thatching roof.

Dalbergia sissoo Roxburgh ex DC. [Fabaceae]

Vernacular Name: *Khuzrab* (Mech); Exscicattus: *Ajita & AP Das 032*.

The timber is used for making furniture (*Ijeng ila*), door (*Duar*) and window (*Janala*) frames.

Deeringia amaranthoides (Lamarck) Merrill [Amaranthaceae]

Vernacular Name: *Maibet* (Mech); Exscicattus: *Ajita & AP Das 427*.

A deep violet dye is extracted from its ripe fruits.

Diospyros malabarica (Desrousseaux) Kosteletsky [Ebenaceae]

Vernacular Name: *Gab Bingfang* (Mech); Exscicattus: *Ajita & AP Das 345*.

Fruit juice is used for tanning fishing nets.

Gmelina arborea Roxburgh [Verbenaceae]

Vernacular Name: *Gambri* (Mech); Exscicattus: *Ajita & AP Das 359*.

The wood is used for making furniture (*Ijeng ila*).

Gossypium arboreum Linnaeus [Malvaceae]

Vernacular Name: *Kshun Phang* (Mech); Exscicattus: *Ajita & AP Das 458*.

Cotton-lints, obtained from its capsules is used for making mattress (*Thousok*) and traditional dresses.

Jatropha curcas Linnaeus [Euphorbiaceae]

Vernacular Name: *Enda* (Mech); Exscicattus: *Ajita & AP Das 138*.

Endosperm is used for lightening purposes.

Lagerstroemia hirsuta (Lamarck) Willdenow [Lythraceae]

Vernacular Name: *Jharul* (Mech); Exscicattus: *Ajita & AP Das 259*.

The timber is used for making house building materials such as poles and planks etc. The wood is used as fuel wood.

Lannea coromandelica (Houttuyn) Merrill [Anacardiaceae]

Vernacular Name: *Giga* (Mech); Exscicattus: *Ajita & AP Das 260*.

Gum oozing out from bas is used as adhesive.

Litsea monopetala (Roxburgh) Persoon [Lauraceae]

Vernacular Name: *Ban* (Mech); Exscicattus: *Ajita & AP Das 191*.

Trunk produces fuel wood.

Luffa aegyptiaca Miller [Cucurbitaceae]

Vernacular Name: *Falla* (Mech); Exscicattus: *Ajita & AP Das 412*.

The fibrous mesocarp is used as bath sponge (Plate IX, Fig. C).

Macaranga denticulata (Blume) Mueller [Euphorbiaceae]

Vernacular Name: *Laigajaou* (Mech); Exscicattus: *Ajita & AP Das 144*.

The wood is used as fuel. Leaves are used for packing meat, fish etc.

Michelia champaca Linnaeus [Magnoliaceae]

Vernacular Name: *Champ* (Mech); Exscicattus: *Ajita & AP Das 031*.

Trunk produces good quality timber for making furniture and fire-wood (Plate IX, Fig. D).

Mikania micrantha Kunth [Asteraceae]

Vernacular Name: *Rakkhasi Bindong* (Mech); Exscicattus: *Ajita & AP Das 432*.

The stem is used as cordage.

Pericampylus glaucas (Lamarck) Merrill [Menispermaceae]

Vernacular Name: *Nalithapa* (Mech); Exscicattus: *Ajita & AP Das 264*.

The stem is used as rope.

Phrynium pubinerve Blume [Marantaceae]

Vernacular Name: *Laihu* (Mech); Exscicattus: *Ajita & AP Das 067*.

Leaf used for making head-cover known as *Ghum*.

Ricinus communis Linnaeus [Euphorbiaceae]

Vernacular Name: *Eri* (Mech); Exscicattus: *Ajita & AP Das 102*.

Few fruits are pierced in a bamboo stick and used it as a torch (*Khati-sukhani*) on burning.

Saccharum spontaneum Linnaeus [Poaceae]

Vernacular Name: *Gigab* (Mech); Exscicattus: *Ajita & AP Das 048*.

Whole dry plant is used for thatching roof (*Ukhum*). Leaves are used for making commercially viable good quality ropes (Plate IX, Fig. E).

Sapindus rarak DC. [Sapindaceae]

Vernacular Name: *Riha Bingfang* (Mech); Exscicattus: *Ajita & AP Das 100*.

Fruits are soaked in water and then used as detergent and shampoo.

Sida acuta Burman f. [Malvaceae]

Vernacular Name: *Bamonmara* (Mech); Exscicattus: *Ajita & AP Das 065*.

Stem is used as cordage and dry whole plant is used as broom.

Shorea robusta Roxburgh ex Gaertner f. [Dipterocarpaceae]

Vernacular Name: *Sal-dom-phang* (Mech); Exscicattus: *Ajita & AP Das 029*.

The soft wood and branches are used as fuel and the heart wood is for making houses, furniture, grain-husking instrument (*Dhiki*) (Plate IX, Fig. F), wooden mortar (*Ooal*), wooden plough (*Nangal*) (Plate IX, Fig. G) etc.

Sterculia villosa Roxburgh [Sterculiaceae]

Vernacular Name: *Odlā* (Mech); Exscicattus: *Ajita & AP Das 435*.

The bark is used as cordage.

Tectona grandis Linnaeus f. [Verbenaceae]

Vernacular Name: *Seghun Bingfang* (Mech); Exscicattus: *Ajita & AP Das 097*.

Trunk produce excellent quality wood for making furniture (*Ijeng ila*) and loom (*Chancheli*); leaves are used for packing. (Plate IX, Fig. H).

Tephrosia candida DC. [Fabaceae]

Vernacular Name: *Bhogla* (Mech); Exscicattus: *Ajita & AP Das 083*.

Dry leaves are fertilizing substance (manure) and stems are used as fuel.

Tetrastigma bracteolatum (Wallich) Planchon [Vitaceae]

Vernacular Name: *Benda Bindong* (Mech); Exscicattus: *Ajita & AP Das 194*.

The stem is used as cordage.

Toona ciliata M. Roemer [Meliaceae]

Vernacular Name: *Tuni* (Mech); Exscicattus: *Ajita & AP Das 142*.

The wood is used for making quality furniture.

Trema orientalis (Linnaeus) Blume [Ulmaceae]

Vernacular Name: *Ban* (Mech); Exscicattus: *Ajita & AP Das 462*.

The wood is used as fuel.

Trewia nudiflora Linnaeus [Euphorbiaceae]

Vernacular Name: *Pitali* (Mech); Exscicattus: *Ajita & AP Das 141*.

The wood is used as fuel.

Vetiveria zizanioides Nash [Poaceae]

Vernacular Name: *Birna* (Mech); Exscicattus: *Ajita & AP Das 049*.

Leaves are used for making broom (*Hasib*).

7.3.2. DISCUSSION

To meet up the needs of their innumerable domestic purposes they collect a large number of plants from their nearby vegetation. This chapter does not deal with the edible or fodder plants as those are very important groups and are presented separately.

7.3.2.1. Habit Groups: The present survey recorded a total of 39 species of angiospermic plants, covering 38 genera and 28 families used different domestic works by the people of *Mech* community living in Duars of West Bengal.

The habit-group distribution of recorded plants of different domestic uses has been analyzed in Table 7.3.1.

Table 7.3.1. Habit group distribution of the plants of domestic uses.

Habit-group	Taxa		
	Family	Genus	Species
Tree	19	23	24
Shrub	4	5	5
Herb	4	5	5
Climber	4	5	5
Total recorded species:			39

It is quite interesting to note that in the category of 'Domestic Plants' out of a total of 39 species recorded 24, i.e. 61.5 % are trees. Number of climbers used here is also comparatively higher and, on the other hand, proportion of herbs is quite less.

7.3.2.2. Types of Domestic Uses: As it has already discussed, we need different plants for different purpose related to our survival. Those types may be recognized as:

- i. **Fuel:** At least for cooking their food they need quite a good amount of fuel. In general, most of the dry plants with sap wood are used for this purpose. Though most of the dry herbs, shrubs and climbers are used as fuel but they prefer the tree trunk and branches with sap-wood or soft wood. At least nine species, coming from 9 genera of 8 families are preferred by them. These are *Alangium chinense*, *Lagerstroemia hirsuta*, *Litsea monopetala*, *Macaranga denticulata*, *Michelia champaca*, *Shorea robusta*, *Tephrosia candida*, *Trema orientalis* and *Trewia nudiflora*.
- ii. **House-building materials:** House building materials include poles, wall materials and thatch. For this 8 species (in 7 genera from 6 families) have been listed, namely *Bambusa*

nutans, *Bambusa balcooa*, *Chukrassia tabularis*, *Corchorus capsularis*, *Dalbergia sissoo*, *Lagerstroemia hirsuta*, *Saccharum spontaneum* and *Shorea robusta*.

- iii. **Wood for furniture:** Timber from only few selected trees is suitable for making furniture. Mechs in Duars generally use 7 species (from 7 genera and 5 families) for this. These are *Callicarpa arborea*, *Dalbergia sissoo*, *Gmelina arborea*, *Michelia champaca*, *Shorea robusta*, *Tectona grandis* and *Toona ciliata*.
- iv. **Stuffing materials:** The floss from *Bombax ceiba* and cotton from *Gossypium arboretum* are used for stuffing mattresses and pillows and for making their traditional dresses. Of these, while the first plant is wild and abundant in this region, the second one is generally grown near the houses. *Gossypium arboretum* is not in cultivation in this area.
- v. **Packing/ Packaging materials:** Generally the large leaves of *Macaranga denticulata* and *Tectona grandis* are used as packing materials.
- vi. **Cordage/Rope:** While the slender and flexible stems of some climbing plants like *Mikania micrantha*, *Pericampylus glaucas* and *Tetrastigma bracteolatum* are used directly as ropes, they extract fibers from the stem of *Corchorus capsularis*, *Sida acuta* and *Sterculia villosa* and twist to produce ropes.
- vii. **Adhesive:** Gum exudes from the bark of *Lannea coromandelica* is used as adhesive.
- viii. **Bath sponge:** The fibrous mesocarp of *Luffa aegyptiaca*, after drying, is widely used as bath-sponge. This is also having good demand in the market for the same purpose.
- ix. **Broom:** Entire whole plant of *Sida acuta* after drying and removing leaves and the stiff dried leaves of *Vetiveria zizanioides* are used as broom by most of the tribal communities in the area. Brooms made from *Vetiveria zizanioides* is also marketed in good amount.
- x. **Detergent/Shampoo:** Fruits of *Sapindus rarak* is well known as a high quality washing agent and is often used as shampoo since long. It is also having quite high demand in the market. The plant grows wild in the Duars.
- xi. **Dye:** Ripe fruits of the amaranthoid climber *Deeringia amaranthoides* is used to extract a red color to dye cloth and for other purposes.
- xii. **Tools handles:** The bases of old bamboos (*Bambusa balcooa*) produce excellent and much durable tool-handles.

- xiii. **Grain processing equipment:** For sieving, winnowing, storing baskets *Bambusa nutans* is used widely. This bamboo is also used as water-storing cylinder.
- xiv. **Fishing & hunting equipments:** For making different types of fishing and hunting equipments they produce branches and main stem of *Bambusa nutans*.
- xv. **Hat/ Umbrella:** Large and leathery leaves of *Phrynium pubinerve* is used for making hats and umbrella especially for cultivation during monsoon.
- xvi. **Illumination:** The endosperm is taken out from the large seeds of *Jatropha curcas* and *Ricinus communis*, dry under the sun. On burning it produce beautiful white light. However, *Jatropha* and castor oils are extracted from seeds and are generally used for lighting lamps.
- xvii. **Manure:** High quality green-manure is produced by decomposing the leafy young branches of *Tephrosia candida*.
- xviii. **Musical instruments:** The timber of *Alstonia scholaris* is used for musical instrument (*Dotara*). The stem of *Bambusa nutans* is also used for making playing sticks for drums.
- xix. **Tanning:** The juice from the young fruits of *Diospyros malabarica* contain high amount of tannin which they used to tan their fishing nets
- xx. **Washing detergent:** Ash produced on burning the fruits of *Cassia fistula* is used for washing utensils.
- xxi. **Wooden sandal:** Wood of *Alstonia scholaris* is used for making wooden-sandals which is referred as *Nakthung*.
- xxii. **Sports goods:** Different types of sports items like *phatka* and *guti* are manufactured from the stem of *Bambusa nutans*, *Barringtonia acutangula* and *Casearia graveolens*.

It is difficult to prepare a final list of domestic uses. But, above discussion has covered the major areas and the majority of the plants they use. Different types of uses of plants have been summarized numerically in Table 7.3.2.

Table 7.3.2. Numerical summery of the uses of plants for different types of domestic requirements

Uses	Taxa		
	Family	Genus	Species
Fuel	8	9	9
House Building	6	7	8

Furniture making	5	7	7
Stuffing material	2	2	2
Packing	2	2	2
Cordage/ Rope	6	6	6
Adhesive	1	1	1
Bath sponge	1	1	1
Broom	2	2	2
Detergent/ Shampoo	1	1	1
Dye	1	1	1
Tools handle	1	1	1
Grain processing equipments	1	1	1
Fishing & hunting equipments	1	1	1
Hat/ Umbrella	1	1	1
Illumination	1	2	2
Manure	1	1	1
Musical instruments	2	2	2
Tanning	1	1	1
Washing utensil	1	1	1
Wooden sandal	1	1	1
Sports goods	3	3	3

From the above discussion one can be attracted to the uses of bamboos in their daily activities. Quite a few species of bamboos are growing in Duars and all those are used by the people of *Mech* community for one or more purposes. Probably, 'bamboo' is the most important plant in the life of *Mech* people after *Oryza sativa*.

7.3.2.3. Marketability of these Plants: During field studies it is noticed that timber and bamboo play a vital role in the economy of *Mech* people. They make various types of bamboo-made containers, fishing traps (*Jakhoi*, *Burung*, *Koka*, *Tepai*), fish keeping container (*Khobai*), sieves (*Chhandrai*), winnowing-fan (*Chhongrai*), wooden mortar (*Ooal*), broom (*Hasib*) etc. and sell them in local markets. In addition, they also collect and sale some amount of fire-wood in local market. The commercial importance of the numerous plants they use in their every-day life are with much market value. But, as per rule of the land, they are not permitted to collect the desired quality and quantity of such plants for marketing.

PLATE IX



Figs. A. *Phatka* (Bamboo made playing stick), B. *Doudung* (Rope) made from the fibre of *Corchorus capsularis*, C. Dry fruit of *Luffa aegyptica* (*Falla*), D. *Michelia champaca* (Timber-wood), E. Whole plant of *Saccharum spontaneum* used as rope, F. *Dhiki* (Husking tool), G. *Nangal* (Wooden plough), H. Leaves of *Tectona grandis* used for packing

7.4. Recorded Medicinal Plants

People of *Mech* community use a large number of plants to treat the diseases they suffer. While in some cases a single plant is used as medicine, and for many other cases they use a definite formulation using more than one species of plants. Most of the required plants they collect from the vegetation around them, few they grow near their residence and few others they procure from other sources including market. The method of preparation of medicines are of different type and the mode of application are generally in the form of tablet, extract, paste or just touch.

The result of the present survey for the ethnomedicinal plants are presented here in two separate categories:

- I. Plants used in solitary, and
- II. Plants used in definite formulations.

7.4.1. Plants Used in Solitary

A good number of plants are used solitarily against numerous diseases or discomforts. Those plants are recorded below along with their vernacular names and the methods of preparation and administration of drugs.

7.4.1.1. ENUMERATION OF PLANTS USED IN SOLITARY

Acmella calva (DC.) R.K. Jansen [Asteraceae] (Plate X, Fig. A).

Vernacular Name: *Usumai* (Mech); Exscicattus: *Ajita & AP Das 118*.

- Leaves are boiled in water with black pepper and one cup of juice is given in the morning for curing body ache.
- Leaves are cooked with fish and given to women daily after childbirth. It strengthens the weak mother.

Acorus calamus Linnaeus [Acoraceae]

Vernacular Name: *Buchi* (Mech); Exscicattus: *Ajita & AP Das 140*.

2 gm of rhizome is pounded and massaged on scalp. After sometime they wash the hairs with water for removal of lice.

Aegle marmelos (Linnaeus) Correa [Rutaceae]

Vernacular Name: *Bel Bingfang* (Mech); Exscicattus: *Ajita & AP Das 437*.

One 2.5 cm long piece of root is tied to the hair to concentrate mind.

Ageratum conyzoides Linnaeus [Asteraceae] (Plate X, Fig. B).

Vernacular Name: *Hagrani Tulutsi* (Mech); Exscicattus: *Ajita & AP Das 183*.

Sufficient leaves are crushed and applied immediately after cut until bleeding stops.

Alstonia scholaris (Linnaeus) R. Brown [Apocynaceae]

Vernacular Name: *Sithaona* (Mech); Exscicattus: *Ajita & AP Das 433*.

Inner stem part is pounded and applied over the chest once in a day in breathing problem till cure.

Amaranthus spinosus Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 434*.

Leaves are pounded and applied on boil for early maturation.

Ambroma augusta (Linnaeus) Linnaeus f. [Sterculiaceae] (Plate X, Fig. C).

Vernacular Name: *Ulat Khambal* (Mech); Exscicattus: *Ajita & AP Das 320*.

About 200 ml juice of root-bark is taken in empty stomach daily in 5 days for dysmenorrhoea.

Andrographis paniculata (Burman f.) Nees [Acanthaceae] (Plate X, Fig. D).

Vernacular Name: *Khalamegh* (Mech); Exscicattus: *Ajita & AP Das 328*.

Dried stem parts put in water overnight. Next morning one cup of the yellowish color water is given internally in empty stomach for small worms (vermifuge).

Argemone mexicana Linnaeus [Papavaraceae] (Plate X, Fig. E).

Vernacular Name: *Khata Bilai* (Mech); Exscicattus: *Ajita & AP Das 283*.

Ten leaves are boiled in 50gms mustard oil (*Thao*) and applied on the itching area twice daily.

Argyreia roxburghii Choisy [Convolvulaceae] (Plate X, Fig. F).

Vernacular Name: *Dudhali Bindong* (Mech); Exscicattus: *Ajita & AP Das 063*.

In constipation, 150-200 gms roots are pounded and boiled in sufficient water. After that ½ cup decoction is given in the morning and another ½ cup decoction in the evening.

Artemisia indica Willdenow [Asteraceae]

Vernacular Name: *Nadaona* (Mech); Exscicattus: *Ajita & AP Das 347*.

Leaf extract is massaged on body to check body-itching.

Azadirachta indica A. Jussieu [Meliaceae]

Vernacular Name: *Neem Bingfang* (Mech); Exscicattus: *Ajita & AP Das 438*.

About 10 leaves are soaked in one-bucket of water and taken a bath with this water to cure itching.

Bambusa balcooa Roxburgh [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 021*.

Five leaves and 1 gm new grown stem part of bamboo, 5 gms fragrant spices (small and big cardamom, cinnamon and cloves) are pounded and boiled in 1 lit water and half cup of decoction is given thrice daily in empty stomach in pneumonia.

Bambusa nutans Wallich ex Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 286*.

About 10-12 leaves are boiled in sufficient water. Juice is given to the patient thrice daily in measles.

Boerhavia coccinea Miller [Nyctaginaceae] (Plate X, Fig. G).

Vernacular Name: *Punornova* (Mech); Exscicattus: *Ajita & AP Das 446*.

- In insect bite, leaves are crushed and the infusion is applied on bitten site.
- 30 ml leaf decoction is taken before sleeping in case of insomnia.

Bombax ceiba Linnaeus [Bombacaceae]

Vernacular Name: *Simul* (Mech); Exscicattus: *Ajita & AP Das 443*.

Thorns are crushed and the paste is applied externally on the face to remove pimples.

Breynia retusa (Dennstedt) Alston [Euphorbiaceae]

Vernacular Name: *Okhen* (Mech); Exscicattus: *Ajita & AP Das 091*.

In mastalgia (breast pain after delivery), 15 gms roots are pounded and simultaneously 20 gms leaves are boiled in water. Root juice is applied on breast twice or thrice daily. Boiled leaf juice is given to the mother once in a day.

Calotropis gigantea (Linnaeus) W.T. Aiton [Asclepiadaceae]

Vernacular Name: *Aganda* (Mech); Exscicattus: *Ajita & AP Das 039*.

Astringent juice of leaves is useful for curing ringworm.

Careya arborea Roxburgh [Lecythidaceae] (Plate X, Fig. H).

Vernacular Name: *Khoom Bingfang* (Mech); Exscicattus: *Ajita & AP Das 440*.

100gms. pounded stem bark is soaked in 250 gms. water for about twelve hours and the decoction is given in the morning and evening in empty stomach in diarrhea.

Cassia alata Linnaeus [Caesalpiniaceae] (Plate XI, Fig. A).

Vernacular Name: *Dad Bingfang* (Mech); Exscicattus: *Ajita & AP Das 229*.

Leaves are crushed and applied on ringworms.

Cassia tora Linnaeus [Caesalpiniaceae] (Plate XI, Fig. B).

Vernacular Name: *Shinchum* (Mech); Exscicattus: *Ajita & AP Das 200, 447*.

- Two pieces of roots are crushed and added with one cup of water. This liquid mix is taken twice in a day in influenza.
- Root is pulled out in one breath in early morning and a piece of root of about 2 cm length is hung with a thread to treat periodic fever (fever which occurs at regular intervals).

Citrus limon (Linnaeus) Osbeck [Rutaceae]

Vernacular Name: *Nareng* (Mech); Exscicattus: *Ajita & AP Das 101*.

Juice of one fruit is mixed with one glass of water. It is taken as antiemetic.

Cissus quadrangularis Linnaeus [Vitaceae]

Vernacular Name: *Harjhor Bindong* (Mech); Exscicattus: *Ajita & AP Das 379*.

Whole plant is pounded and smeared on bone fractured area and plastered with bamboo splint.

Colocasia esculenta (Linnaeus) Schott [Araceae]

Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 338*.

- It is used to itch the ear with the petiole to get relieve from ear itchiness.
- One gram rhizome and one pinch potash-alum (phatkiri) are pounded and boiled in ½ cup coconut oil and applied thrice daily in gum wound. During treatment it is advised not to take any sour food and fish

Corchorus capsularis Linnaeus [Tiliaceae]

Vernacular Name: *Phatto* (Mech); Exscicattus: *Ajita & AP Das 349*.

3 tablespoon leaf juice and 1 tablespoon mustard oil are mixed and applied on eruption caused by cater pillars.

Costus speciosus (Koenig) J.E. Smith [Costaceae]

Vernacular Name: *Debgugri* (Mech); Exscicattus: *Ajita & AP Das 317*.

In case of leucorrhoea (white discharge), half-cup of rhizome extract and two pinches of sugar candy (*misri*) are mixed and given orally in empty stomach once in a day for one week.

Crassocephalum crepidioides (Bentham) S. Moore [Asteraceae]

Vernacular Name: *Jenthai* (Mech); Exscicattus: *Ajita & AP Das 145*.

Leaves are pounded and the paste is applied on cut and continued till cure.

Curcuma aeruginosa Roxburgh [Zingiberaceae] (Plate XI, Fig. C).

Vernacular Name: *Gocham Haldu* (Mech); Exscicattus: *Ajita & AP Das 370*.

When fall under evil influence, 10 gms rhizome is crushed and given to the attacked person. This may be considered as a magico-religious treatment.

Curcuma longa Linnaeus [Zingiberaceae] (Plate XI, Fig. D).

Vernacular Name: *Haldi* (Mech); Exscicattus: *Ajita & AP Das 348*.

A small part of flower is tied to the hair of the expectant mother at the time of delivery to induce labour pain. Simultaneously, some part of flower is ground and given orally to her.

Cuscuta reflexa Roxburgh [Cuscutaceae]

Vernacular Name: *Sona Bindong* (Mech); Exscicattus: *Ajita & AP Das 380*.

Whole plant is crushed and applied externally on psoriasis affected area of the body.

Cynodon dactylon (Linnaeus) Persoon [Poaceae]

Vernacular Name: *Duba Gang-se* (Mech); Exscicattus: *Ajita & AP Das 054, 215*.

- Leafy twigs are crushed and half-cup of decoction is given to the patient of anaemia daily till cure.
- In case of brittle nail, whole plant is crushed and applied on affected nail.

Cyperus rotundus Linnaeus [Cyperaceae]

Vernacular Name: *Mutha Gang-se* (Mech); Exscicattus: *Ajita & AP Das 075*.

Three tubers are pounded and given in constipation twice daily for two days.

Datura metel Linnaeus [Solanaceae]

Vernacular Name: *Dotra* (Mech); Exscicattus: *Ajita & AP Das 074, 449.*

2 – 3 crushed seeds are boiled in ½ cup of mustard oil. This medicated oil is massaged on patient's body to cure the rheumatic pain.

- In case of mad dog-bite, 6 seeds are cracked and eaten on first day; 2 seeds on second day and 1 seed on the third day.
- After making a hole in the fruit, the whitlow-affected finger is entered into the fruit and keeps it till cure.

Eclipta prostrata (Linnaeus) Linnaeus [Asteraceae] (Plate XI, Fig. E).

Vernacular Name: *Kalkhasri* (Mech); Exscicattus: *Ajita & AP Das 104.*

1 gm leaves are soaked in one glass of water overnight. The infusion is taken in the morning in empty stomach in lochia (excessive bleeding after delivery).

Euphorbia hirta Linnaeus [Euphorbiaceae] (Plate XI, Fig. F).

Vernacular Name: *Dudhali* (Mech); Exscicattus: *Ajita & AP Das 337.*

Sufficient leaves are boiled in sufficient water and taken once in a day with boiled rice for improving lactation.

Glycosmis pentaphylla (Retzius) DC. [Rutaceae]

Vernacular Name: *Motra* (Mech); Exscicattus: *Ajita & AP Das 448.*

Half-cup of leaf juice is taken as vermifuge in empty stomach in the morning daily till cure.

Gmelina arborea Roxburgh [Verbenaceae]

Vernacular Name: *Gambri* (Mech); Exscicattus: *Ajita & AP Das 359.*

In pharyngitis ripe fruits are eaten raw daily.

Hibiscus rosa-sinensis Linnaeus [Malvaceae] (Plate XI, Fig. G).

Vernacular Name: *Panchhomukhi Jhova* (Mech); Exscicattus: *Ajita & AP Das 225.*

In metrorrhagia (irregular menstrual cycle), three flowers are pounded and the decoction is given in empty stomach for 4 – 5 days before menstrual cycle.

Ipomoea aquatica Forsskål [Convolvulaceae]

Vernacular Name: *Khalmi* (Mech); Exscicattus: *Ajita & AP Das 079.*

A necklace is prepared from small pieces of stem and the necklace is stuck round the head of the jaundice-patient.

Jatropha curcas Linnaeus [Euphorbiaceae]

Vernacular Name: *Enda* (Mech); Exscicattus: *Ajita & AP Das 361.*

- Inner part of stem is crushed and boiled in water. The decoction is applied thrice daily for two days in toothache.
- Latex from stem is dropped onto a sugar-cake (*Batasa*) and given such three sugar-cakes once in a day for 2-3 days in empty stomach in blood dysentery.

Leucas indica (Linnaeus) R. Brown ex Vatke [Lamiaceae] (Plate XI, Fig. H).

Vernacular Name: *Khansisa* (Mech); Exscicattus: *Ajita & AP Das 089, 305.*

- Young leaves are pounded and taken into a cotton-cloth. 5 drops of juice is dropped into the nostrils twice daily till cure.
- In case of body swelling, 20 – 25 leaves are pounded and slight salt is added with it and the paste is applied on swelling for 2 – 3 days.
- One spoon of crushed leaf is mixed with one glass of water and gurgled with this twice daily in sore throat.
- 12 leaves are pounded and squeezed; the extract is mixed with 4-5 drops mustard oil and applied on itching areas with the hen feather.

Mangifera indica Linnaeus [Anacardiaceae]

Vernacular Name: *Khaizou* (Mech); Exscicattus: *Ajita & AP Das 414*.

Stem-bark is crushed and 4-5 spoon-full of juice is mixed with 1 cup of milk and given in the morning in empty stomach in jaundice.

Melastoma malabathricum Linnaeus [Melastomataceae]

Vernacular Name: *Daukhiboi* (Mech); Exscicattus: *Ajita & AP Das 445*.

About 70 gms of dried roots are boiled in 100 gm black Sesamum oil. This medicated oil is used once in a week for dyeing hair.

Mimosa pudica Linnaeus [Mimosaceae]

Vernacular Name: *Sumukhchi* (Mech); Exscicattus: *Ajita & AP Das 059*.

Root is pulled out in one breath is stuck to the lock of hair of the expectant mother at the time of delivery to induce labor-pain. Immediately after delivery, the root piece is removed.

Momordica dioica Roxburgh ex Willdenow [Cucurbitaceae]

Vernacular Name: *Aamkhora* (Mech); Exscicattus: *Ajita & AP Das 235*.

Half root-tuber is crushed and massaged the affected part of the body in rheumatic pain.

Moringa oleifera Lamarck [Moringaceae]

Vernacular Name: *Sojno Bingfang* (Mech); Exscicattus: *Ajita & AP Das 041*.

About a 1.5 cm long root piece is kept into the eye corner of the affected side to relieve hemichrania.

Morus australis Poirer [Moraceae]

Vernacular Name: *Thaikhong Chef* (Mech); Exscicattus: *Ajita & AP Das 167, 234*.

- About a 1.2 cm long root-piece of mulberry plant is wrapped with 1 cm long root piece of *Mimosa pudica* in a cloth and hung with a thread around the neck to treat jaundice.
- Juice obtained from 100 – 150 gm leaf, is mixed with 1 cup of curd and given to the patient of jaundice once in a day till cure.

Musa balbisiana Colla [Musaceae]

Vernacular Name: *Atia Thalit* (Mech); Exscicattus: *Ajita & AP Das 251, 239*.

- One raw fruit is pounded and taken once in a day for one week in menorrhagia.
- In kidney-stone formation, one-cup of root juice is mixed with one-tablespoon sugar candy and given to the patient 4 – 5 times daily till the stones are cleared.
- Acute burnt patient is made to lie down on banana-leaf to prevent burning sensation.

Neanotis hirsute (Linnaeus f.) Lewis [Rubiaceae]

Vernacular Name: *Khaskhasi Bilai* (Mech); Exscicattus: *Ajita & AP Das 207*.

Leaf extract is given internally in ear to treat ear sore.

Neolamarchia cadamba (Roxburgh) J. Bosser [Rubiaceae]

Vernacular Name: *Khadam* (Mech); Exscicattus: *Ajita & AP Das 043*.

- One leaf is slightly roasted and then boiled in sufficient amount of water; half-cup juice is then given orally twice daily till the cure of asthma.
- In hydrocele, scrotum is wrapped with a fresh leaf and changed the leaf daily till cure.

Ocimum tenuiflorum Linnaeus [Lamiaceae]

Vernacular Name: *Tulutsi* (Mech); Exscicattus: *Ajita & AP Das 008*.

- A leaf is kept below the pillow before sleeping to prevent bad dream and to have a sound sleep.
- Sufficient leaf juice is applied on itching areas caused by the contact of the poisonous hairs of caterpillars.
- 3 table-spoon of leaf juice and 1 pinch of common salt is mixed together and applied externally on lentigo affected area of the body.

Oxalis corniculata Linnaeus [Oxalidaceae]

Vernacular Name: *Shimpli* (Mech); Exscicattus: *Ajita & AP Das 343*.

Leaves are pounded and applied on tongue twice daily for curing tongue-sore.

Paederia foetida Linnaeus [Rubiaceae]

Vernacular Name: *Khipi Bindong* (Mech); Exscicattus: *Ajita & AP Das 364*.

Raw leaves are pounded and given to the patient with hot rice twice daily to check amoebic dysentery.

Peperomia pellucida (Linnaeus) Kunth [Piperaceae]

Vernacular Name: *Luchhi Bilai* (Mech); Exscicattus: *Ajita & AP Das 451*.

In scorpion bite, some leaves are grounded and the infusion is applied on bitten area.

Phlogacanthus thyrsoformis (Hardwicke) Mabberley [Acanthaceae]

Vernacular Name: *Chinchingri Khala* (Mech); Exscicattus: *Ajita & AP Das 082*.

- 5 – 6 leaves are boiled in sufficient water and filtered. The filtrate is given to the patient for checking whooping cough; for children, 2-3 tablespoons in a day and for adults one cup in a day.
- In malarial fever, 2 leaves are roasted and taken orally once daily till cure.

Phrynium pubinerve Blume [Marantaceae]

Vernacular Name: *Laihu* (Mech); Exscicattus: *Ajita & AP Das 474*.

Children suffering from malnutrition is made to lay down on the leaf for one month. Simultaneously during the treatment, a small part of skull of *Macaca mullatta* Zimmermann (monkey) is tied with a string and hung around the neck of the child.

Pogostemon amaranthoides Benthham [Lamiaceae]

Vernacular Name: *Hagra Bingfang* (Mech); Exscicattus: *Ajita & AP Das 147*.

Leaves are pounded and applied on wound till cure.

Plumbago zeylanica Linnaeus [Plumbaginaceae]

Vernacular Name: *Emao* (Mech); Exscicattus: *Ajita & AP Das 368*.

- A small piece of root is wrapped in a cloth and tied to the waist to prevent dropsy.
- 20 gms roots are crushed and the obtained juice is taken orally as abortifacient.

Ricinus communis Linnaeus [Euphorbiaceae]

Vernacular Name: *Eri* (Mech); Exscicattus: *Ajita & AP Das 367*.

A necklace prepared from its fruits is hung around the neck to prevent goiter.

Scoparia dulcis Linnaeus [Scrophulariaceae]

Vernacular Name: *Rakhep* (Mech); Exscicattus: *Ajita & AP Das 344*.

Roots are pounded and half-cup of its extract is added with one glass of water. One such glass of water is given twice daily as diuretic till curing.

Sida cordifolia Linnaeus [Malvaceae]

Vernacular Name: *Bamonmara* (Mech); Exscicattus: *Ajita & AP Das 336*.

- Half-cup root juice and half tablespoon sugar candy are mixed together and taken orally once in a day till curing jaundice.
- A small piece of root is tied to the hair of the new mother just after delivery to expel the placenta.

Solanum torvum Swartz [Solanaceae]

Vernacular Name: *Khunthai Raja* (Mech); Exscicattus: *Ajita & AP Das 450*.

Fruits are boiled in water and the boiled fruits are taken against bilious once in a day till cure.

Solanum viarum Clarke [Solanaceae]

Vernacular Name: *Kata Fithai* (Mech); Exscicattus: *Ajita & AP Das 205*.

In case of whitlow of finger, made a hole in the fruit and entered the finger into the fruit and kept it till cure.

Stephania japonica (Thunberg) Miers [Menispermaceae]

Vernacular Name: *Chhantala* (Mech); Exscicattus: *Ajita & AP Das 139*.

Aquatic decoction of its leaves is prepared and legs are massaged with the decoction at night to check jaundice.

Streblus asper Loureiro [Moraceae]

Vernacular Name: *Seora Bingfang* (Mech); Exscicattus: *Ajita & AP Das 149*.

Dry leaves are powdered and 1 spoon-full of leaf-powder is mixed with 1 glass of hot water and taken twice a day in rheumatic pain.

Terminalia arjuna (Roxburgh ex DC.) Wight & Arnott [Combretaceae]

Vernacular Name: *Harjun* (Mech); Exscicattus: *Ajita & AP Das 098*.

In heart diseases, 10 gms of stem-bark is boiled with 3 cups of water till it reduces to 1 cup and given orally once in a day.

Terminalia bellirica (Gaertner) Roxburgh [Combretaceae]

Vernacular Name: *Bhaora* (Mech); Exscicattus: *Ajita & AP Das 024*.

Stem-bark is crushed and 1 table-spoon is taken orally in empty stomach once in a day in dyspepsia.

Terminalia chebula (Gaertner) Retzius [Combretaceae]

Vernacular Name: *Shilikhya* (Mech); Exscicattus: *Ajita & AP Das 037*.

3-4 fruits are soaked in one glass of water for overnight and next morning it is taken in empty stomach to remove constipation.

Typhonium trilobatum (Linnaeus) Schott [Araceae]

Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 157*.

In anorexia (loss of appetite), sufficient leaves and garlic are pounded and consumed. It also increases the taste of tongue.

Vitex negundo Linnaeus [Verbenaceae]

Vernacular Name: *Nisindou* (Mech); Exscicattus: *Ajita & AP Das 182*.

Fried leaves are eaten to prevent rheumatic pain.

Zea mays Linnaeus [Poaceae]

Vernacular Name: *Dumba* (Mech); Exscicattus: *Ajita & AP Das 374*.

Five table-spoons full of corn powder is added with one glass of water and taken in dipsomnia.

Zizyphus mauritiana Lamarck [Rhamnaceae]

Vernacular Name: *Boi* (Mech); Exscicattus: *Ajita & AP Das 238*.

A leaf is being touched to the styte affected eye and then kept in straw-roof; the process is continued for 7 days, each day with a new leaf.

7.4.1.2. ANALYSIS OF RESULT

Medicinal Plants are also referred as Herbal Plants. But, this does not mean that medicinal plants are mostly herbaceous. In fact plants of medicinal use are belonging to almost all habit groups. At the same time, they also belong to very wide taxonomic groups.

7.4.1.2.1. Habit Groups: The present investigation revealed the uses of 74 species of plants belonging to 66 genera and 45 families to cure at least 64 types of human diseases. considering their habit groups, there are 17 species of trees e.g. *Aegle marmelos*, *Alstonia scholaris*, *Azadirachta indica*, *Bambusa balcooa*, *Bambusa nutans*, *Bombax ceiba*, *Careya arborea*, *Gmelina arborea*, *Mangifera indica*, *Moringa oleifera*, *Morus australis*, *Neolamarckia cadamba*, *Streblus asper*, *Terminalia arjuna*, *Terminalia bellirica*, *Terminalia chebula*, *Zizyphus mauritiana* from 13 families; 16 species shrubs like *Ambroma augusta*, *Artemisia indica*, *Breynia retusa*, *Calotropis gigantea*, *Cassia alata*, *Citrus limon*, *Datura metel*, *Glycosmis pentaphylla*, *Hibiscus rosa-sinensis*, *Jatropha curcas*, *Melastoma malabathricum*, *Phlogacanthus thyrsoformis*, *Plumbago zeylanica*, *Ricinus communis*, *Solanum torvum*, *Vitex negundo*

from 12 families; 26 species of herbs e.g. *Acmella calva*, *Ageratum conyzoides*, *Amaranthus spinosus*, *Andrographis paniculata*, *Argemone mexicana*, *Boerhavia coccinea*, *Cassia tora*, *Corchorus capsularis*, *Crassocephalum crepidioides*, *Cynodon dactylon*, *Cyperus rotundus*, *Eclipta prostrata*, *Euphorbia hirta*, *Ipomoea aquatica*, *Leucas indica*, *Mimosa pudica*, *Neanotis hirsuta*, *Ocimum tenuiflorum*, *Oxalis corniculata*, *Peperomia pellucida*, *Phrynium pubinerve*, *Pogostemon amaranthoides*, *Scoparia dulcis*, *Sida cordifolia*, *Solanum viarum*, *Zea mays* from 19 families; geophytes are 7 species belonging to 5 families i.e. *Acorus calamus*, *Colocasia esculenta*, *Costus speciosus*, *Curcuma aeruginosa*, *Curcuma longa*, *Musa balbisiana*, *Typhonium trilobatum* and 6 species climbers belonging to 6 families (e.g. *Argyreia roxburghii*, *Cissus quadrangularis*, *Cuscuta reflexa*, *Momordica dioica*, *Paederia foetida* and *Stephania japonica*).

7.4.1.2.2. Useful plant parts: Different parts of medicinal plant species were used by the *Mech* as medicine. For curing ailments, the use of aboveground plant parts was higher than the underground plant parts. Of the aboveground plant parts, leaf was used in majority of cases (34 species) e.g. *Acmella calva*, *Ageratum conyzoides*, *Amaranthus spinosus*, *Argemone mexicana*, *Artemisia indica*, *Azadirachta indica*, *Bambusa balcooa*, *Bambusa nutans*, *Boerhavia coccinea*, *Breynia retusa*, *Calotropis gigantea*, *Cassia alata*, *Corchorus capsularis*, *Crassocephalum crepidioides*, *Eclipta prostrata*, *Euphorbia hirta*, *Glycosmis pentaphylla*, *Leucas indica*, *Morus australis*, *Musa balbisiana*, *Neanotis hirsuta*, *Neolamarckia cadamba*, *Ocimum tenuiflorum*, *Oxalis corniculata*, *Paederia foetida*, *Peperomia pellucida*, *Phlogacanthus thyriformis*, *Phrynium pubinerve*, *Pogostemon amaranthoides*, *Stephania japonica*, *Streblus asper*, *Typhonium trilobatum*, *Vitex negundo* and *Zizyphus mauritiana* from 23 families, followed by fruits (9 species from 7 families) like *Citrus limon*, *Datura metel*, *Gmelina arborea*, *Musa balbisiana*, *Ricinus communis*, *Solanum torvum*, *Solanum viarum*, *Terminalia chebula* and *Zea mays*; stems (5 species from 5 families) e.g. *Alstonia scholaris*, *Andrographis paniculata*, *Bambusa balcooa*, *Ipomoea aquatica* and *Jatropha curcas*; stem bark 4 species belonging to 3 families (*Careya arborea*, *Mangifera indica*, *Terminalia arjuna* and *Terminalia bellirica*); whole plants 3 species from 3 families (e.g. *Cissus quadrangularis*, *Cuscuta reflexa* and *Cynodon dactylon*); flowers 2 species (*Curcuma longa* and *Hibiscus rosa-sinensis*); prickles of *Bombax ceiba* and seeds of *Datura metel*. Petiole of *Colocasia esculenta* is also used as medicine.

Different underground plant parts such as roots (12 species from 12 families), namely *Aegle marmelos*, *Argyreia roxburghii*, *Breynia retusa*, *Cassia tora*, *Melastoma malabathricum*, *Mimosa pudica*, *Moringa oleifera*, *Morus australis*, *Musa balbisiana*, *Plumbago zeylanica*, *Scoparia dulcis*, *Sida cordifolia* and root-bark of *Ambroma augusta*; rhizome (4 species from 4 families) like *Colocasia*

esculenta, *Costus speciosus*, *Curcuma aeruginosa* and *Curcuma longa*; root-tubers of *Cyperus rotundus*, *Momordica dioica* were also used by the *Mech* people as a source of curing ailments.

7.4.1.2.3. Diseases treated: A critical assessment of the wide range of diseases they treat those include, on one hand, common diseases like cold & cough, constipation, pneumonia, dysentery, fever, insect bite, jaundice, skin diseases etc.

7.4.1.2.4. Magico-religious practices: The tribals have much faith in magico-religious beliefs and *Ojas* use such techniques along with their physical methods as these acts like psychological treatments. In numerous instances, *Ojas* chant mantras when they deliver plant parts to the patients or treating a patient.

These remedies have been fairly well accepted by a majority of the *Mech*. There is a variation in the method like tying to different parts of the body, laying down the patient on plant parts and use like a necklace. Sometimes it is noticed that along with the plant parts, animal part like skull of *Macaca mullatta* is found to be useful.

To concentrate mind, usefulness of *Aegle marmelos* root is believed that a patient gets total relief from mental stress. Root of *Cassia tora* is used for periodic fever; in that case it is advised the root is pulled out in one breath in early morning. Crushed rhizome *Curcuma aeruginosa* is given orally to the patient when she/he is fallen under evil spirit. The necklace, made by the stem of *Ipomoea aquatica* is used for jaundice. In case of delivery to induce labour pain, the use of flower of *Curcuma longa* and root of *Mimosa pudica* are believed that this treatment make safe delivery. The woman acting as midwife of the *Mech* community is performed this act. Immediately after delivery, the placenta is said to be dangerous among the *Meches*. They believe that it should be removed within 2 – 10 minutes otherwise when it takes longer time it will go to heart and it can be life threatening for the mother. Therefore, to ease the labor or to expel the placenta, *Meches* give the root piece of *Sida cordifolia* to the laboring women. A necklace prepared from the fruits of *Ricinus communis* is used to prevent goiter. In case of stye, the usefulness of leaf of *Zizyphus mauritiana* is quite unique and appears to be effective. However, it is also possible that the leaf has no role in recovering the disease and the natural recovery takes just seven days.

7.4.2. Plants Used in Definite Formulations

The use of individual plants for the treatment of diseases has already been discussed. But to treat most of the diseases *Mech* medicine practitioners generally use more than one plant together in definite formulations for the preparation of drugs. Here in this section, only such formulations have been presented. However, recorded formulations have been clubbed together under different groups like Gastro-intestinal diseases, Hepatic diseases, Circulatory diseases, Gynaecological problems, Eye Diseases, etc.

7.4.2.1. GASTRO-INTESTINAL DISEASES

I. *Bacillary Dysentery*:

FORMULA 1:

Ingredients: (i) *Musa balbisiana* Colla [Ajita & AP Das 329], (ii) *Cynodon dactylon* (Linnaeus) Persoon [Ajita & AP Das 330] and (iii) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 331].

Mech Names: (i) *Athia Thalith*, (ii) *Duba-gangse* and (iii) *Manimuni Gedet*.

Preparation: Equal quantities of roots of *Musa balbisiana*, whole part of *Cynodon dactylon* and *Centella asiatica* are crushed and mixed with sufficient cold water and filtered.

Dose: One cup of extract is given at an interval of one hour.

FORMULA 2:

Ingredients: (i) *Eleutherine bulbosa* (Miller) Urban [Ajita & AP Das 069], (ii) *Houttuynia cordata* Thunberg [Ajita & AP Das 070], (iii) *Mentha spicata* Linnaeus [Ajita & AP Das 071], (iv) *Psidium guajava* Linnaeus [Ajita & AP Das 072] and (v) *Citrus limon* (Linnaeus) Osbeck [Ajita & AP Das 073].

Mech Names: (i) *Hagrani Sabrum*, (ii) *Maisundri*, (iii) *Madam-nai Bilai*, (iv) *Thamb* and (v) *Nareng*.

Preparation: One bulb of *Eleutherine bulbosa*, 5 leaves of *Houttuynia cordata* and *Mentha spicata*, 5 tender leaves of *Psidium guajava* and 2 leaves of *Citrus limon* are pounded together and made a paste.

Dose: Three tablespoonfuls for adult and one tablespoonful for children, once daily.

II. Stomachache:

Ingredients: (i) *Acorus calamus* Linnaeus [Ajita & AP Das 356], (ii) *Zingiber officinale* Roscoe [Ajita & AP Das 359] and (iii) *Curcuma aeruginosa* Roxburgh [Ajita & AP Das 370].

Mech Names: (i) *Buchi*, (ii) *Adi* and (iii) *Gocham Haldu*.

Preparation: 1 gm rhizome of *Acorus calamus*, 0.5 gm rhizome of *Zingiber officinale* and 1 gm of *Curcuma aeruginosa* are pounded and mixed with one cup of water.

Dose: Given to the patient thrice daily till cure.

7.4.2.2. HEPATIC DISEASES

I. Liver Disorder:

Ingredients: (i) *Saccharum spontaneum* Linnaeus [Ajita & AP Das 375], (ii) *Zizyphus mauritiana* Lamarek [Ajita & AP Das 376], (iii) *Citrus limon* (Linnaeus) Osbeck [Ajita & AP Das 377] and (iv) *Justicia adhatoda* Linnaeus [Ajita & AP Das 378].

Mech Names: (i) *Gigab*, (ii) *Boi*, (iii) *Nareng* and (iv) *Chinchiri*.

Preparation: 2 gm root of *Saccharum spontaneum*, 10 prickles of *Zizyphus mauritiana*, 10 thorns of *Citrus limon* and 3 leaves of *Justicia adhatoda* are pounded and made into pills and dried.

Dose: Pills are taken thrice daily with water.

II. Jaundice:

FORMULA 1:

Ingredients: (i) *Stephania glabra* (Roxburgh) Miers [Ajita & AP Das 001], (ii) *Argyreia roxburghii* Choisy [Ajita & AP Das 002]

Mech Names: (i) *Dibauli Bidat* and (ii) *Dudhali Bindong*

Preparation: 10 – 15 gm tuber of *Stephania glabra* and 5 leaves of *Argyreia roxburghii* are pounded and made into small pills and dried.

Dose: The pills are taken thrice daily with water.

FORMULA 2:

Ingredients: (i) *Natsiatum herpeticum* Buchanan-Hamilton ex Arnott [Ajita & AP Das 062], (ii) *Stephania glabra* (Roxburgh) Miers [Ajita & AP Das 070] and (iii) *Argyreia roxburghii* Choisy [Ajita & AP Das 063].

Mech Names: (i) *Dokha Khamflai*, (ii) *Dibauli Bidat* and (iii) *Dudhali Bindong*

Preparation: 1 branch each of *Natsiatum herpeticum* and *Argyreia roxburghii* and 1 branch with tuber of *Stephania glabra* are twisted together and made it like a garland and is hung round the patient's neck.

Dose: Use it for 7 days and change it again, till recovery.

FORMULA 3:

Ingredient: (i) *Oroxylum indicum* (Linnaeus) Kurz [*Ajita & AP Das* 044], (ii) Hen's egg and (iii) Common salt

Mech Name: (i) *Kharo Khandai*, (ii) *Dau Bidoi* and (iii) *Shong-khoi*.

Preparation: 2 tablespoonful juice of stem bark, 1 hen's egg and 1 pinch common salt are blended and fried the mixture like an omelet. The omelet is divided into 3 equal pieces.

Dose: These 3 pieces are given orally thrice daily for 3 days. During the treatment the patients are advised not to take fish and meat

FORMULA 4:

Ingredients: *Plumbago zeylanica* Linnaeus [*Ajita & AP Das* 231] and *Solanum tuberosum* Linnaeus [*Ajita & AP Das* 232].

Mech Names: (i) *Emao* and (ii) *Thablati*.

Preparation: Making a hole in a potato and ½ inch (±1.2 cm) root of *Plumbago zeylanica* is inserted into the potato and roasted and peeled off the potato

Dose: Given orally once in a day for 3 days.

7.4.2.3. CIRCULATORY DISEASES

I. Piles:

FORMULA 1:

Ingredients: (i) *Albizia procera* (Roxburgh) Bentham [*Ajita & AP Das* 223] and (ii) *Careya arborea* Roxburgh [*Ajita & AP Das* 224].

Mech Names: (i) *Gapht Siris* and (ii) *Khoom Bingfang*.

Preparation: Equal quantities of bark of *Albizzia procera* and *Careya arborea* are pounded together

Dose: Half a cup of extract is given orally for 4 – 5 days daily.

FORMULA 2:

Ingredients: (i) *Dillenia pentagyna* Roxburgh [*Ajita & AP Das* 362] and (ii) *Bischofia javanica* Blume [*Ajita & AP Das* 363].

Mech Names: (i) *Rae Bingfang* and (ii) *Thaichho*.

Preparation: 100 gm barks of *Dillenia pentagyna* and 100 gm barks of *Bischofia javanica* are boiled in 1 lit. water and reduced this water into 250 ml.

Dose: Given ½ cup twice daily till cure.

7.4.2.4. GYNAECOLOGICAL PROBLEMS

I. Puerperal Disease:

Ingredients: (i) *Croton roxburghii* Balakrisnan [Ajita & AP Das 171], (ii) *Artemisia indica* Willdenow [Ajita & AP Das 172], (iii) *Citrus limon* (Linnaeus) Osbeck [Ajita & AP Das 173], (iv) *Hypericum japonicum* Murray [Ajita & AP Das 174], (v) *Desmodium triflorum* (Linnaeus) DC. [Ajita & AP Das 175], (vi) *Solanum anguivi* Lamarck [Ajita & AP Das 176], (vii) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 177], (viii) *Hydrocotyle sibthorpioides* Lamarck [Ajita & AP Das 178], (ix) *Acorus calamus* Linnaeus [Ajita & AP Das 179] and (x) *Curcuma aromatica* Salisbury [Ajita & AP Das 180].

Mech Names: (i) *Chhikho Domphang*, (ii) *Nadaona*, (iii) *Nareng*, (iv) *Sona Bingfang*, (v) *Chimpli Gochhang*, (vi) *Khunthai*, (vii) *Manimuni Gedet*, (viii) *Manimuni Galei*, (ix) *Buchi* and (x) *Khaslot*.

Preparation: 5 gm bark of *Croton roxburghii*, 5 gm bark of *Citrus limon*, 25 gm whole plants of *Hypericum japonicum*, 5 gm whole plants of *Desmodium triflorum*, 5 gm roots of *Solanum anguivi*, 25 gm leaves of *Centella asiatica* and *Hydrocotyle sibthorpioides* and small and large cardamom are pounded together and boiled in 1 bottle rice beer and then sieved.

Dose: Half-bottle is given to the patient daily for one week.

After one week

Preparation: 10 gm rhizome of *Acorus calamus*, 10 gm rhizome of *Curcuma aromatica* and 5 gm leaves of *Artemisia indica* are pounded with sufficient water and sieved.

Dose: 20 ml infusion is given thrice daily.

II. Menorrhagia:

FORMULA 1:

Ingredients: (i) *Alpinia nigra* (Gaertner) Burt [Ajita & AP Das 315], (ii) *Entada rheedii* Sprengel [Ajita & AP Das 316], (iii) *Costus speciosus* (Koenig ex Retzius) Smith [Ajita & AP Das 317] and (iv) *Spondias pinnata* (Linnaeus f.) Kurz [Ajita & AP Das 318].

Mech Names: (i) *Tharai*, (ii) *Gilathakuri*, (iii) *Debgugri* and (iv) *Thaiscchip*.

Preparation: Rhizomes of *Alpinia nigra* and *Costus speciosus*, seeds of *Entada scandens* and stem bark of *Spondias pinnata* are taken in equal quantity, crushed and mixed with 500 ml water. Divide this water in four parts.

Dose: Each part is given separately in one day.

FORMULA 2:

Ingredients: (i) *Nymphaea pubescens* Willdenow [Ajita & AP Das 220], (ii) *Imperata cylindrica* (Linnaeus) Raeuschel [Ajita & AP Das 221] and (iii) *Butea monosperma* (Lamarck) Taubert [Ajita & AP Das 222].

Mech Names: (i) *Daeii Bibar*, (ii) *Thurmus* and (iii) *Phalas Bibar*.

Preparation: One young leaf of *Nymphaea pubescens*, 3 – 4 roots of *Imperata cylindrica* and 4 – 5 tender shoots of *Butea monosperma* are pounded and made extract.

Dose: Three teaspoonfuls of extract is given daily for 5 – 6 days; may be continued for 20 – 25 days if required.

III. Dysmenorrhoea:

Ingredients: (i) *Zingiber purpureum* Roscoe [Ajita & AP Das 199], (ii) *Stephania glabra* (Roxburgh) Miers [Ajita & AP Das 201], (iii) *Morinda angustifolia* Roxburgh [Ajita & AP Das 202] and (iv) *Artemisia indica* Willdenow [Ajita & AP Das 203].

Mech Names: i) *Bura Usud*, (ii) *Dibauli Bidat*, (iii) *Achhou Gakha* and (iv) *Nadaona*.

Preparation: 50 gm rhizome of *Zingiber purpureum*, 10-15gm tuber piece of *Stephania glabra*, 5 leaves of *Morinda angustifolia* and 5 twigs of *Artemisia indica* are pounded and soaked in 500gm water for half an hour.

Dose: Half-cup liquid is given thrice daily. It is advised to avoid taking any fish or sour food during the treatment.

IV. Infertility:

Ingredients: (i) *Hibiscus rosa-sinensis* Linnaeus [Ajita & AP Das 214], (ii) *Cynodon dactylon* (Linnaeus) Persoon [Ajita & AP Das 215] and (iii) Sundried rice grains (*Oryza sativa* Linnaeus).

Mech Names: (i) *Panchamukhi Jhova*, (ii) *Duba-gangse* and (iii) *Alua Mairong*.

Preparation: Equal quantities of whole plant of *Cynodon dactylon* and sundried rice dust are mixed and fried.

Dose: Fried mix is taken 2 - 3 days in a week. Simultaneously, three pounded flowers of *Hibiscus rosa-sinensis* are taken 3 - 4 days before menses and continuing 4 - 5 days in empty stomach.

7.4.2.5. RESPIRATORY DISEASES

I. Asthma:

Ingredients: (i) *Crinum amoenum* Roxburgh [Ajita & AP Das 076], (ii) Hen's egg.

Mech Names: (i) *Mosoi Sabrum* and (ii) *Dau Bidoi*.

Preparation: About ¼th of a mature bulb of *Crinum amoenum* is chopped and mixed with one blended hen's egg and then fried to prepare an omelet. This omelet and boiled sunned rice are given to the patient of asthma.

Dose: It is said that the single dose causes vomiting after 5 minutes and cures the disease on the next day.

II. Bronchitis:

Ingredients: (i) *Justicia adhatoda* Linnaeus [Ajita & AP Das 334] & (ii) *Tinospora cordifolia* (Willdenow) Hooker f. & Thomson [Ajita & AP Das 335].

Mech Names: (i) *Chinchiri* and (ii) *Gultai*.

Preparation: 10 -12 leaves of *Justicia adhatoda* and 5 - 6 inches stem of *Tinospora cordifolia* are boiled in sufficient water and filtered.

Dose: Half cup of filtrate is given thrice daily till cure.

III. Common Cough & Cold:

Ingredients: (i) *Pupalia lappacea* (Linnaeus) A. Jussieu [Ajita & AP Das 351] & (ii) *Musa balbisiana* Colla [Ajita & AP Das 352]

Mech Names: (i) *Samultha* and (ii) *Athia Thalith*

Preparation: 100 gm whole plant of *Pupalia lappacea* and 100 gm dried flowers of *Musa balbisiana* are roasted and added in 250 ml of water

Dose: Half-cup juice is given thrice daily.

IV. Common Cough:

Ingredients: (i) *Ocimum tenuiflorum* Linnaeus [301] and (ii) *Zingiber officinale* Roscoe [302].

Mech Names: (i) *Tulutsi* and (ii) *Adi*.

Preparation: Juice of 10 – 12 leaves of *Ocimum tenuiflorum* and a few drop of rhizome extract of *Zingiber officinale* are mixed with 1 tablespoonful of honey.

Dose: 2 tablespoonfuls of mixture is given orally once daily.

V. Pneumonia:

FORMULA 1:

Ingredients: (i) *Solanum torvum* Swartz [*Ajita & AP Das* 003], (ii) *Drymaria cordata* (Linnaeus) Willdenow ex Roemer & Schultes [*Ajita & AP Das* 004], (iii) *Hypericum japonicum* Murray [*Ajita & AP Das* 005], (iv) *Centella asiatica* (Linnaeus) Urban [*Ajita & AP Das* 006], (v) *Hydrocotyle sibthorpioides* Lamarck [*Ajita & AP Das* 007] and small & big cardamom, cinnamon bark, black pepper, nutmeg.

Mech Names: (i) *Khunthai Raja*, (ii) *Barmadaree*, (iii) *Sona Bingfang*, (iv) *Manimuni Gedet*, (v) *Manimuni Galei*.

Preparation: Three to four grams root of *Solanum torvum* and five leafy shoots *Drymaria cordata*, *Hypericum japonicum*, *Centella asiatica* and *Hydrocotyle sibthorpioides* and 5 – 6 gms fragrant spices are pounded together, made into small pills and dried.

Dose: One pill is given thrice daily with water.

FORMULA 2:

Ingredients: (i) *Centella asiatica* (Linnaeus) Urban [*Ajita & AP Das* 053], (ii) *Hydrocotyle sibthorpioides* Lamarck. [*Ajita & AP Das* 054], (iii) *Bambusa nutans* Wallich ex Munro [*Ajita & AP Das* 055], (iv) *Hypericum japonicum* Murray [*Ajita & AP Das* 056], (v) *Scoparia dulcis* Linnaeus [*Ajita & AP Das* 057], (vii) *Phyllanthus amarus* Schumacher & Thonning [*Ajita & AP Das* 058], (viii) *Mimosa pudica* Linnaeus [*Ajita & AP Das* 059], (ix) *Clerodendrum serratum* (Linnaeus) Moon [*Ajita & AP Das* 060], (x) *Desmodium*

triflorum (Linnaeus) DC. [Ajita & AP Das 061], big & small cardamom, cinnamon and black pepper.

Mech Names: (i) *Manimuni Gedet*, (ii) *Manimuni Galei*, (iii) *Ooa*, (iv) *Sona Bingfang*, (v) *Rakhep*, (vi) *Banamlai*, (vii) *Sumukhchi*, (viii) *Holupang* and (ix) *Chimpli Gochhang*.

Preparation: 25 gm whole plants of *Centella asiatica* and *Hydrocotyle sibthorpioides*, 5 whole plants of *Hypericum japonicum*, *Phyllanthus amarus* and *Desmodium triflorum*, 50 gm young shoots of *Bambusa nutans*, 25 gm leaves of *Scoparia dulcis*, 5 roots of *Mimosa pudica*, 10 gm bark of *Clerodendrum serratum* and 5 gm fragrant spices are pounded together and boiled in 1 lit. of water.

Dose: Half-cup of decoction is given to the patients 2-3 times a day. 2-3 tablespoons generally prescribed to the children.

FORMULA 3:

Ingredients: (i) *Piper longum* Linnaeus [Ajita & AP Das 106], (ii) *Zingiber officinale* Roscoe [Ajita & AP Das 107], (iii) *Hypericum japonicum* Murray [Ajita & AP Das 108], (iv) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 109], (v) *Hydrocotyle sibthorpioides* Lamarck [Ajita & AP Das 110], (vi) *Lippia javanica* (Burman f.) Sprengel [Ajita & AP Das 111], (vii) *Oxalis corniculata* Linnaeus [Ajita & AP Das 112], (viii) *Lasia spinosa* (Linnaeus) Thwaites [Ajita & AP Das 113] and fragrant spices.

Mech Names: (i) *Pipli*, (ii) *Adi*, (iii) *Sona Bingfang*, (iv) *Manimuni Gedet*, (v) *Manimuni Galei*, (vi) *Anthai Bazeb*, (vii) *Shimpli* & (viii) *Sibru*.

Preparation: 2 gm fruits of *Piper longum*, 2 gm dry rhizome of *Zingiber officinale*, 4 – 5 gm whole plants of *Hypericum japonicum*, 4 – 5 gm whole plants of *Centella asiatica* and *Hydrocotyle sibthorpioides*, 4 – 5 gm leaves of *Oxalis corniculata*, 5 – 6 leaves of *Lippia javanica*, 5 gm stem of *Lasia spinosa* and 5 gm fragrant spices are boiled in water for half an hour and sieved the infusion.

Dose: Half-cup of infusion is taken thrice daily.

FORMULA 4:

Ingredients: (i) *Rotala rotundifolia* (Buchanan - Hamilton) Koehne [Ajita & AP Das 086], (ii) *Murdannia nudiflora* (Linnaeus) Brenan [Ajita & AP Das 087], (iii) *Lindernia anagallis* (Burman f.) Pennell [Ajita & AP Das 088], (iv) *Mecardonia procumbens* (Miller) Small [Ajita & AP Das 090], (v) *Leucas indica* (Linnaeus) R. Brown ex Vatke [Ajita & AP Das 089] and (vi) *Scoparia dulcis* Linnaeus [Ajita & AP Das 091].

Mech Names: (i) *Gozah Bibar*, (ii) *Lalnak Bibar*, (iii) *Gaphtnak Bibar*, (iv) *Gauda Bibar*, (v) *Khansisa* & (vi) *Rakhep*.

Preparation: Whole plants of *Rotala rotundifolia*, *Murdannia nudiflora*, *Lindernia anagallis*, *Mecardonia procumbens*, roots of *Leucas indica* and leaves of *Scoparia dulcis*, all together 50 gm are taken and pounded and boiled in sufficient water.

Dose: One-tablespoonful of decoction is given 2 – 3 times daily.

FORMULA 5:

Ingredients: (i) *Piper attenuatum* Buchanan-Hamilton ex Miquel [*Ajita & AP Das* 127], (ii) *Piper sylvaticum* Roxburgh [*Ajita & AP Das* 128], (iii) *Zanthoxylum rhetsa* (Roxburgh) DC. [*Ajita & AP Das* 129], (iv) *Centella asiatica* (Linnaeus) Urban [*Ajita & AP Das* 130], (v) *Hydrocotyle sibthorpioides* Lamarck [*Ajita & AP Das* 131], (vi) *Leucas indica* (Linnaeus) R. Brown ex Vatke [*Ajita & AP Das* 132] and fragrant spices.

Mech Names: (i) *Galthou Phatai*, (ii) *Hagrani Phatai*, (iii) *Jabreng*, (iv) *Manimuni Gedet*, (v) *Manimuni Galei*, (vi) *Khansisa*.

Preparation: Three leaves of *Piper attenuatum*, four leaves of *Piper sylvaticum*, five shoots of *Centella asiatica* and *Hydrocotyle sibthorpioides*, 2 gm bark of *Zanthoxylum rhetsa* and five shoots of *Leucas indica* and 5 gm fragrant spices are pounded together, made into small pills and dried.

Dose: One pill is given twice or thrice daily with water.

FORMULA 6:

Ingredients: (i) *Smilax ovalifolia* Roxburgh [*Ajita & AP Das* 151], (ii) *Centella asiatica* (Linnaeus) Urban [*Ajita & AP Das* 152], (iii) *Hydrocotyle sibthorpioides* Lamarck [*Ajita & AP Das* 153], (iv) *Leucas indica* (Linnaeus) R. Brown ex Vatke [*Ajita & AP Das* 154] and (v) *Bambusa nutans* Wallich ex Munro [*Ajita & AP Das* 155].

Mech Names: (i) *Kaijomai*, (ii) *Manimuni Gedet*, (iii) *Manimuni Galei*, (iv) *Khansisa* and (v) *Ooa*.

Preparation: Two leaves of *Smilax ovalifolia*, 5 gm whole plants of *Centella asiatica* and *Hydrocotyle sibthorpioides*, 2 gm root of *Leucas indica* and 2 gm new grown part of *Bambusa nutans* and clove, cinnamon, cardamom 5 gm are pounded and boiled in 3 glasses of water.

Dose: One glass of decoction is given thrice daily.

7.4.2.6. SKIN DISEASES

I. Abscess:

Ingredients: (i) *Pericampylus glaucas* (Lamarck) Merrill [Ajita & AP Das 077], (ii) *Clerodendrum serratum* (Linnaeus) Moon [Ajita & AP Das 078], (iii) *Tetraodon cutcutia* Hamilton (fish) and (iv) Mustard oil.

Mech Names: (i) *Nalithapa*, (ii) *Holupang*, (iii) *Tepa Naya-na* and (iv) *Thao*.

Preparation: 5 – 6 dry leaves of *Pericampylus glaucas*, 5 – 6 gm dry roots of *Clerodendrum serratum* and one dry *Tetraodon cutcutia* are crushed and boiled in 100 gm of mustard oil and sieved and applied.

Dose: Applied locally twice daily for 3 – 4 days. Also, advised to avoid banana, sour fruit, and pumpkin (*Cucurbita maxima* fruits) and *Vigna mungo* pulses.

II. Bed Sore:

Ingredients: (i) *Costus speciosus* (Koenig ex Retzius) Smith [Ajita & AP Das 353], (ii) *Helicteres isora* Linnaeus [Ajita & AP Das 350] and (iii) *Stephania glabra* (Roxburgh) Miers [Ajita & AP Das 354].

Mech Names: (i) *Debgugri*, (ii) *Bismoura* and (iii) *Dibauli Bidat*.

Preparation: 5 gm rhizome of *Costus speciosus*, 1 fruit of *Helicteres isora* and 5 gm tuber of *Stephania glabra* are crushed together and made into a paste.

Dose: Applied on sore twice daily for one week.

III. Blister:

Ingredients: (i) *Momordica charantia* Linnaeus [Ajita & AP Das 096], (ii) *Polygonum plebeium* Roxburgh [Ajita & AP Das 119] and (iii) Coconut oil

Mech Names: (i) *Udasi*, (ii) *Daunasi* and (iii) *Narel-thao*.

Preparation: 4 – 5 leaves of *Momordica charantia*, 2 – 3 whole plants of *Polygonum plebeium* are crushed and boiled in 100 gm coconut oil. It is then cooled down and stored in a bottle.

Dose: The oil is applied locally with hen's feather thrice daily.

IV. Boils:

Ingredients: (i) *Sida acuta* Burman f. [Ajita & AP Das 065] and (ii) *Curcuma aromatica* Salisbury [Ajita & AP Das 066] and (iii) Coconut oil.

Mech Names: (i) *Bamonmara*, (ii) *Khaslat* and (iii) *Narel-thao*.

Preparation: Leaves of *Sida acuta* and rhizome of *Curcuma aromatica* are taken in equal quantity and pounded and boiled in sufficient coconut oil.

Dose: This medicated oil is applied on boil at night.

V. Dermatitis:

Ingredients: (i) *Derris polystachya* Benthham [*Ajita & AP Das 453*], (ii) *Entada rheedii* Sprengel [*Ajita & AP Das 454*], (iii) *Stephania glabra* (Roxburgh) Miers [*Ajita & AP Das 455*] and (iv) Mustard oil

Mech Names: (i) *Dibauli Bidat*, (ii) *Gilathakuri*, (iii) *Rhu* and (iv) *Thao*.

Preparation: 5 gm roots of *Derris polystachya*, 5 gm dry seeds of *Entada scandens* and 5 gm dry tuber of *Stephania glabra* are crushed and boiled in 100 gm mustard oil and sieved and applied on sore

Dose: Twice daily for 3-4 days.

VI. Gangrene:

Ingredients: (i) *Stephania glabra* (Roxburgh) Miers [*Ajita & AP Das 354*], (ii) *Eclipta prostrata* (Linnaeus) Linnaeus [*Ajita & AP Das 371*], (iii) *Justicia gendarussa* Linnaeus f. [*Ajita & AP Das 372*], (iv) *Chelone mydas* Linn. (turtle) and (v) Mustard oil.

Mech Names: (i) *Dibauli Bidat*, (ii) *Kalkhasri*, (iii) *Jatراسي*, (iv) *Khau-cham* and (v) *Thao*.

Preparation: 10 gm dry shoot of *Eclipta prostrata*, 10 gm dry leaf of *Justicia gendarussa*, 5 gm dry tuber of *Stephania glabra* and dusted carapace of *Chelone mydas* are powdered and boiled in 100 gm of mustard oil and sieved.

Dose: Applied locally twice daily.

VII. Leprosy:

Ingredients: (i) *Stephania glabra* (Roxburgh) Miers [*Ajita & AP Das 354*], (ii) *Hypericum japonicum* Murray [*Ajita & AP Das 355*], (iii) *Acorus calamus* Linnaeus [*Ajita & AP Das 356*], (iv) *Terminalia chebula* (Gaertner) Retzius [*Ajita & AP Das 357*], (v) *Ocimum tenuiflorum* Linnaeus [*Ajita & AP Das 358*], (vi) *Zingiber officinale* Roscoe [*Ajita & AP Das 360*] (vii) Rice dust and (viii) Fragrant spices.

Mech Name: (i) *Dibauli Bidat*, (ii) *Sona Bingfang*, (iii) *Buchi*, (iv) *Shilikhya*, (v) *Tulutsi*, (vi) *Adi*.

Preparation: 250 gm tuber of *Stephania glabra*, 10 gm leaves of *Hypericum japonicum*, 50 gm rhizome of *Acorus calamus*, 5 seeds of *Terminalia chebula*, 10 gm leaf of *Ocimum*

tenuiflorum, 100 gm rhizome of *Zingiber officinale*, 250 gm rice dust and 10 gm fragrant spices are dried and pounded together.

Dose: Three-teaspoonful dust mixed to one-cup of water and given thrice daily, continuing for one month.

VIII. Scabies:

Ingredients: (i) *Eclipta prostrata* (Linnaeus) Linnaeus [Ajita & AP Das 371], (ii) *Justicia gendarussa* Linnaeus f. [Ajita & AP Das 372] (iii) *Kaempferia rotunda* Linnaeus [Ajita & AP Das 373], and (iv) Mustard oil.

Mech Names: (i) *Kalkhasri*, (ii) *Jatrasi*, (iii) *Agniswar*, and (iv) *Thao*.

Preparation: 5 gm rhizome of *Kaempferia rotunda*, 10 gm dry leaves of *Eclipta prostrata* and *Justicia gendarussa* are pounded and boiled in 100 gm of mustard oil and sieved.

Dose: Applied on scabies thrice daily.

7.4.2.7. OPHTHALMIC DISEASES

I. Cataract:

Ingredients: (i) *Polygonum plebeium* R. Brown [Ajita & AP Das 119], (ii) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 120], (iii) *Hydrocotyle sibthorpioides* Lamarck [Ajita & AP Das 121].

Mech Names: (i) *Daunasi*, (ii) *Manimuni Gedet*, (iii) *Manimuni Galei*.

Preparation: Equal quantities of Tender shoots of *Polygonum plebeium*, leaves of *Centella asiatica* and *Hydrocotyle sibthorpioides* are crushed together and strained.

Dose: The filtrate is put into the eyes thrice daily for three days.

7.4.2.8. DENTAL PROBLEMS

I. Pyorrhea:

Ingredients: (i) *Leucas indica* (Linnaeus) R. Brown ex Vatke [Ajita & AP Das 476], (ii) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 477] and (iii) *Hydrocotyle sibthorpioides* Lamarck [Ajita & AP Das 478] and (iv) *Zingiber officinale* Roscoe [Ajita & AP Das 479].

Mech Names: (i) *Khansisa*, (ii) *Manimuni Gedet*, (iii) *Manimuni Galei* and (iv) *Adi*.

- Preparation:** Equal quantities of leaves of *Leucas indica*, *Centella asiatica*, *Hydrocotyle sibthorpioides* and *Zingiber officinale* are crushed and put the paste in between the affected teeth.
- Dose:** 4-5 times daily and allowed to adhere for 10-20 minutes.

7.4.2.9. STINGS & BITES

I. Snake bite:

- Ingredients:** (i) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 308], (ii) *Hydrocotyle sibthorpioides* Lamarck [Ajita & AP Das 309] and (iii) *Ocimum tenuiflorum* Linnaeus [Ajita & AP Das 310].

Mech Names: (i) *Manimuni Gedet*, (ii) *Manimuni Galei* and (iii) *Tulutsi*.

- Preparation:** Equal quantities of leaves of *Ocimum tenuiflorum*, *Centella asiatica* and *Hydrocotyle sibthorpioides* are pounded together without water

Dose: The paste is repeatedly applied externally on wounds caused by snakebite. After sometimes the color of paste is changed and then, again applied, till the poison is taken out.

7.4.2.10. ORTHOPAEDIC

I. Sprain:

- Ingredients:** (i) *Datura metel* Linnaeus [Ajita & AP Das 325], (ii) *Ocimum tenuiflorum* Linnaeus [Ajita & AP Das 326] and (iii) *Cynodon dactylon* (Linnaeus) Persoon [Ajita & AP Das 327].

Mech Names: (i) *Dotra*, (ii) *Tulutsi* and (iii) *Duba-gangse*.

- Preparation:** Seeds of one fruit of *Datura metel*, two shoots of *Ocimum tenuiflorum* and one handful whole plant of *Cynodon dactylon* are pounded together and made into a paste.

Dose: The paste is applied on the affected area once in a day.

7.4.2.11. EAR-NOSE-THROAT

I. Epistaxis:

- Ingredients:** (i) *Centella asiatica* (Linnaeus) Urban [Ajita & AP Das 331], (ii) *Hydrocotyle sibthorpioides* Lamarck [Ajita & AP Das 332] and (iii) *Leucas indica* (Linnaeus) R. Brown ex Vatke [Ajita & AP Das 333].

Mech Names: (i) *Khansisa*, (ii) *Manimuni Gedet* and (iii) *Manimuni Galei*.

Preparation: Equal quantities of leaves of *Leucas indica*, *Centella asiatica* and *Hydrocotyle sibthorpioides* are crushed and squeezed

Dose: Five drops of juice is dropped into the nostrils twice daily.

7.4.2.12. PSYCHIATRY

I. Insanity (Mental Disease):

Ingredients: (i) *Corchorus capsularis* Linnaeus [*Ajita & AP Das* 423] and (ii) *Pericampylus glaucas* (Lamarck) Merrill [*Ajita & AP Das* 424] and (iii) *Stephania glabra* (Roxburgh) Miers [*Ajita & AP Das* 425].

Mech Names: (i) *Phatto*, (ii) *Nalithapa* and (iii) *Dibauli Bidat*.

Preparation: 1 gm seed of *Corchorus capsularis*, 7 – 8 leaves of *Pericampylus glaucas* and 6 gm tuber of *Stephania glabra* are boiled in sufficient water. After that the boiled things are pounded and cooled, and then mixed with ½ cup of coconut oil.

Dose: This oil is applied on scalp twice daily till cure.

7.4.2.13. RENAL DISEASES

I. Disuria:

Ingredients: (i) *Acampe papillosa* (Lindley) Lindley [*Ajita & AP Das* 019] and (ii) *Kalanchoe pinnata* (Lamarck) Persoon [*Ajita & AP Das* 018].

Mech Names: (i) *Mauji lanjai* and (ii) *Oatkhambra*.

Preparation: One leaf of *Acampe papillosa* and one leaf *Kalanchoe pinnata* are pounded together.

Dose: The ointment is smeared on the lower abdomen twice daily, continuing for 2 – 3 days.

7.4.2.14. NEUROLOGICAL PROBLEMS

I. Hemisrania:

Ingredients: (i) *Eclipta prostrata* (Linnaeus) Linnaeus [*Ajita & AP Das* 104] and (ii) *Musa balbisiana* Colla [*Ajita & AP Das* 105]

Mech Names: (i) *Kalkhasri* and (ii) *Athia Thalith*.

Preparation: Five whole plants of *Eclipta prostrata* and half unripe fruit (banana) of *Musa balbisiana* are pounded together

Dose: The paste is smeared on forehead twice daily.

7.4.2.15. MAGICO-RELIGIOUS

I. Evil Spirit:

FORMULA 1:

Ingredients: (i) *Chromolaena odoratum* (Linnaeus) King & Robinson [Ajita & AP Das 093], (ii) *Xanthium indicum* Koenig ex Roxburgh [Ajita & AP Das 094], (iii) *Drymaria cordata* (Linnaeus) Willdenow ex Roemer & Schultes [Ajita & AP Das 095] and (iv) Coconut oil.

Mech Names: (i) *Germani Bingfang*, (ii) *Okhra*, (iii) *Barmadaree* and (iv) *Narel-thao*.

Preparation: Equal quantities of twigs of *Chromolaena odoratum* and *Xanthium strumarium* and whole plant of *Drymaria cordata* are pounded together and heated with sufficient coconut oil.

Dose: Sometimes people suffer due to evil spirits, and then this medicated oil is applied externally on the body.

FORMULA 2:

Ingredients: (i) *Acorus calamus* Linnaeus [Ajita & AP Das 323] and (ii) *Murraya koenigii* (Linnaeus) Sprengel [Ajita & AP Das 324].

Mech Name: (i) *Buchi* and (ii) *Jafsri Bilai*.

Preparation: 2 gm rhizome of *Acorus calamus* and 15 leaves of *Murraya koenigii* are pounded together and kept it for fermentation for one day.

Dose: Smear on body once in a day till cure.

7.4.2.16. ANALYSIS OF OBSERVATION

7.4.2.16.1. Taxonomic and Habit Groups: A total of 83 species of plants belonging to 76 genera and 49 families are recorded here used in 31 types of diseases. Out of these 12 species are trees [*Psidium guajava*, *Zizyphus mauritiana*, *Oroxylum indicum*, *Albizia procera*, *Careya arborea*, *Dillenia pentagyna*, *Bischofia javanica*, *Spondias pinnata*, *Butea monosperma*, *Zanthoxylum rhetsa*, *Derris polystachya*, *Terminalia chebula*], 19 species of shrubs [*Citrus limon*, *Justicia adhatoda*, *Plumbago zeylanica*, *Croton roxburghii*, *Artemisia indica*, *Solanum anguivi*, *Morinda angustifolia*, *Hibiscus rosa-sinensis*, *Ocimum tenuiflorum*, *Solanum torvum*, *Clerodendrum serratum*, *Lippia javanica*, *Helicteres isora*, *Sida acuta*, *Justicia gendarussa*, *Datura metel*, *Kalanchoe pinnata*, *Chromolaena odoratum*, *Murraya koenigii*], 27 species of herbs [*Cynodon dactylon*, *Centella asiatica*, *Houttuynia cordata*, *Mentha spicata*, *Saccharum spontaneum*, *Hypericum japonicum*, *Desmodium triflorum*, *Hydrocotyle sibthorpioides*, *Imperata cylindrica*, *Oryza sativa*, *Pupalia lappacea*, *Drymaria cordata*, *Bambusa nutans*, *Scoparia dulcis*,

Phyllanthus amarus, *Mimosa pudica*, *Oxalis corniculata*, *Rotala rotundifolia*, *Murdannia nudiflora*, *Lindernia anagallis*, *Macaronesia procumbens*, *Leucas indica*, *Polygonum plebeium*, *Eclipta prostrata*, *Corchorus capsularis*, *Xanthium indicum*, *Nymphaea pubescens*], 11 species of climbers [*Stephania glabra*, *Argyreia roxburghii*, *Natsiatum herpeticum*, *Entada rheedii*, *Tinospora cordifolia*, *Piper longum*, *Piper attenuatum*, *Piper sylvaticum*, *Smilax ovalifolia*, *Pericampylus glaucas*, *Momordica charantia*], 13 species of geophytes i.e. *Musa balbisiana*, *Eleutherine bulbosa*, *Acorus calamus*, *Zingiber officinale*, *Curcuma aeruginosa*, *Solanum tuberosum*, *Curcuma aromatica*, *Alpinia nigra*, *Costus speciosus*, *Zingiber purpureum*, *Crinum amoenum*, *Lasia spinosa*, *Kaempferia rotunda*, and just 1 species of epiphyte [*Acampe papillosa*].

Apart from these 83 species of plants, some other materials are also used as ingredients. Of these common salt, mustard oil (*Brassica nigra*) and coconut oil (*Cocos nucifera*) are medicinal ingredients and some spices like small & big cardamom [*Elettaria cardamom* & *Amomum subulatum*], cinnamon bark (*Cinnamomum zeylanicum*), black pepper (*Piper nigrum*) and nutmeg (*Myristica fragrans*) are also used sometime to improve the acceptability of the prepared medicine by the patient.

At least three animal parts are also reported to use as ingredients, these are (i) Hen's egg, (ii) *Tetraodon cutcutia* (fish) and *Chelone mydas* (turtle).

7.4.2.16.2. Efficacy of Drugs: For the treatment of as much as 31 types of diseases a great variety of at least 43 formulations are recorded by *Mech* traditional healers. The efficacy of these medicines were also studied and the result has been presented in Table 7.4.1.

Table 7.4.1. Efficacy Status of the Recorded Formulations

Diseases		Total No. of patients	Fully cured	Partly cured	Not cured
GASTRO-INTESTINAL DISEASES					
<i>Bacillary Dysentery</i>	Formula 1	5	5	0	0
	Formula 2	5	3	2	0
<i>Stomachache</i>		4	4	0	0
TOTAL		14	12	2	0
HEPATIC DISEASES					
Jaundice	Formula 1	7	5	2	0
	Formula 2	10	7	3	0
	Formula 3	6	3	2	1
	Formula 4	6	2	3	1

<i>Liver Disorder</i>		5	2	1	2
TOTAL		34	19	11	4
CIRCULATORY SYSTEM DISORDER					
<i>Piles</i>	Formula 1	6	2	1	3
	Formula 2	4	3	0	1
TOTAL		10	5	1	4
GYNAECOLOGICAL DISEASES					
<i>Puerperal Disease</i>		5	3	2	0
<i>Menorrhagia</i>	Formula 1	7	3	1	3
	Formula 2	5	2	1	2
<i>Dysmenorrhoea</i>		6	5	1	0
<i>Infertility</i>		2	2	0	0
TOTAL		25	15	5	5
RESPIRATORY DISEASES					
<i>Asthma</i>		4	1	2	1
<i>Bronchitis</i>		5	2	2	1
<i>Common Cold & Cough</i>		8	5	2	1
<i>Common Cough</i>		5	3	2	0
<i>Pneumonia</i>	Formula 1	6	3	3	0
	Formula 3	5	2	2	1
	Formula 4	4	2	1	1
	Formula 5	3	2	1	0
	Formula 6	5	1	2	2
TOTAL		45	21	17	7
SKIN DISEASES					
<i>Abscess</i>		7	4	3	0
<i>Bed Sore</i>		2	2	0	0
<i>Blister</i>		8	5	3	0
<i>Boil</i>		6	3	2	1
<i>Dermatitis</i>		5	2	3	0
<i>Gangrene</i>		3	2	0	1
<i>Leprosy</i>		2	0	1	1
<i>Scabies</i>		5	3	2	0
TOTAL		38	21	14	3
OPHTHALMIC DISEASES					
<i>Cataract</i>		7	4	2	1
DENTAL PROBLEMS					
<i>Pyorrhoea</i>		5	2	2	1
STINGS & BITES					
<i>Snake Bite</i>		3	3	0	0
ORTHOPAEDIC					
<i>Sprain</i>		5	5	0	0
EAR-NOSE-THROAT (ENT) DISEASE					
<i>Epistaxis</i>		6	4	1	1
PSYCHIATRY					
<i>Insanity</i>		2	1	0	1
RENAL DISEASES					
<i>Disuria</i>		4	1	2	1
NEUROLOGICAL PROBLEMS					

Hemicrania		10	9	1	0
MAGICO-RELIGIOUS					
Evil Spirit	Formula 1	3	2	1	0
	Formula 2	4	1	2	1
TOTAL		7	3	3	1
GRAND TOTAL		215	125	61	29

The analysis of the efficacy table shows that the drugs prepared and administered by *Mech* traditional healers are of very high quality. Out of the 43 formulations, only in a few [Piles Formula 1; Pneumonia Formula 6; Insanity and Disurea] the results of treatments are not satisfied. Otherwise 39 other formulations worked satisfactorily. As a whole, out of 215 patients responded 125 (i.e. 58.14 %) were fully cured. Another 61 patients (i.e. 28.37 %) were partially cured and only 29 patients (i.e. 13.49 %) expressed their dissatisfaction on the result of the treatment.

7.4.3. DISCUSSION

The analysis of the results of survey for the plants used as medicine either in solitary or in combination with other plants and additives lead to the record of 74 species of plants used as solitary and 83 species in combinations. The medicines were almost purely made of plant materials. Only in few cases other non-plant materials has been used. Common salt is the only non-organic materials used in these medicines. Other non-plant materials are Hen's egg, one species of fish and the carapace of turtle.

The medicines are made of different parts of the recorded plants. These include root, bulb, tuber, rhizome, stem, leafy shoot, leaf, flower, fruit, seed, resin, etc almost all parts of plants were used. This no doubt reflects their high research ability. The power of observation of *Mech* traditional healers appeared to be very high. They are nicely using the rich flora of Duars for this purpose.

The medicines they prepare are used afresh in most of the cases. However, in some cases, they prepare tablets or powders. But they never preserve any medicine for a longer period. Plants they use are mostly in freshly collected condition (Plate XII, Fig. A). The paste, the extract or decoction, inhalation, touch, etc – so many forms or methods of treatment are practiced by these healers (Plate XII, Figs. B – H). Their power of identification of plants in the vegetation is also extremely high. They can recognize the repeatedly collected from different habitat. They do not add any preservative and rarely use additive to improve taste and/or aroma.

For the treatment of any disease, the first requirement is the diagnosis of the disease. The power of diagnosis of *Mech* traditional healers also appears to be quite high and that has been reflected in the rate of recovery.

Many of the plants they use are well known for their traditional values. A quick scan through *The Wealth of India* (Anonymous 1976) or any other account on Indian Medicinal Plants (Kirtikar & Basu 1933) will reveal that a good proportion of *Mech* medicinal plants are established ones for their medicinal properties. Species like *Psidium guajava*, *Terminalia chebula*, *Justicia Adhatoda*, *Artemisia indica*, *Ocimum tenuiflorum*, *Centella asiatica*, *Acorus calamus*, *Zingiber officinale*, *Curcuma aeruginosa*, *Alpinia nigra*, *Costus speciosus*, *Phyllanthus amarus*, *Eclipta prostrate*, *Kaempferia rotunda*, *Tinospora cordifolia*, *Piper longum*, *Aegle marmelos*, *Alstonia scholaris*, *Azadirachta indica*, *Terminalia arjuna*, *Terminalia bellirica*, *Ambroma augusta*, *Calotropis gigantea*, *Cassia alata*, *Citrus limon*, *Ricinus communis*, *Vitex negundo*, *Andrographis paniculata*, *Boerhavia coccinea*, *Curcuma longa*, etc are all well established plants and are used in *Mech* traditional medicines.

In addition, there are many other plants those are also used by many other traditional groups and their medicines are also working quite effectively (Rai & Bhujel 1999; Rai 2002; Rai & Das 2004; Chowdhury & Das 2007; Dutta 2007).

7.4.4. Conclusion

Although these herbal remedies are incomparable to the modern medicines but the efficacy rate at least in *Mech* people is quite high. It is also possible that level of immunity against different diseases is very high as their life style is mostly nature dependent and that is why these simple medicines become so effective. At the same time, it is also important to test the efficacy of these plants scientifically in modern laboratories.

PLATE X



Figs. A. *Acmella calva*, B. *Ageratum conyzoides*, C. *Ambroma augusta*, D. *Andrographis paniculata*, E. *Argemone mexicana*, F. *Argyreia roxburghii*, G. *Boerhavia coccinea*, H. *Careya arborea*

PLATE XI



Figs. A. *Cassia alata*, B. *Cassia tora*,
C. *Curcuma aeruginosa*, D. *Curcuma longa*,
E. *Eclipta prostrata*, F. *Euphorbia hirta*,
G. *Hibiscus rosa-sinensis*, H. *Leucas indica*

PLATE XII



Figs. A. Collection of herbal medicines, B. D. Preparation medicine, E. H. Prepared pills, extract, decoction etc.

7.5. Recorded Plants for Veterinary Medicine

7.5.1. ENUMERATION OF PLANTS OF VETERINARY MEDICINE

Main domesticated animals in *Mech* villages are cows, goats, buffaloes, pigs, cats, dogs and fowls. As for man, these animals also suffer from different diseases and they are also treated by *Ojas* using mostly plant materials. A close scrutiny of the plants they use for the treatment of their different pets has revealed the identity of 29 species of plants covering 28 genera from 21 families and is enumerated below.

Alstonia scholaris R. Brown [Apocynaceae]

Vernacular Name: *Sithaona* (Mech); Exscicattus: *Ajita & AP Das 030*.

100 gm dry bark powder is mixed with food and given to the pigs, cows and goats. It acts as a vermicide.

Amaranthus spinosus Linnaeus [Amaranthaceae]

Vernacular Name: *Khudna* (Mech); Exscicattus: *Ajita & AP Das 103*.

Leafy shoots are fed to cows and buffaloes to enhance lactation.

Amorphophallus bulbifer (Roxburgh) Blume [Araceae]

Vernacular Name: *Tha Thadung* (Mech); Exscicattus: *Ajita & AP Das 081*.

Tuber is cut into thin slices and smeared with little amount of salt and rubbed on tongue of cow for curing sore on tongue.

Annona reticulata Linnaeus [Annonaceae]

Vernacular Name: *Balam Fithai* (Mech); Exscicattus: *Ajita & AP Das 415*.

Leaf paste is rubbed on body of cattle for removing lice.

Azadirachta indica A. Jussieu [Meliaceae]

Vernacular Name: *Neem Bilai* (Mech); Exscicattus: *Ajita & AP Das 038*.

The body of cattle is washed with leaf decoction once in a day for 3 days in skin diseases.

Bambusa nutans Wallich ex Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 286*.

2 – 3 kg raw leaves are fed to the cows against dysentery.

Cannabis sativa Linnaeus [Cannabaceae]

Vernacular Name: *Ganja* (Mech); Exscicattus: *Ajita & AP Das 460*.

Huge amount of fresh shoots are kept in the fowl shed in time incubation for removing/ repelling insects from the place.

Centella asiatica (Linnaeus) Urban [Apiaceae]

Vernacular Name: *Manimuni Gedet* (Mech); Exscicattus: *Ajita & AP Das 290*.

In case of drowsiness and white stool in hen, equal quantities of leaves *Centella asiatica*, *Hydrocotyle sibthorpioides* and dry fish are pounded together and mixed with boiled rice and given to the hen once in a day.

Colocasia esculenta (Linnaeus) Schott [Araceae]

Vernacular Name: *Thadung* (Mech); Exscicattus: *Ajita & AP Das 050*.

Leaves and petioles are chopped and boiled in sufficient water and fed to the pigs twice a day for 7 days to induce fertility.

Corchorus capsularis Linnaeus [Tiliaceae]

Vernacular Name: *Phatto*; Exscicattus: *Ajita & AP Das 294*.

50gm dry leaves are soaked in 250 ml of water overnight and then strained; this water is then given orally to the goats in equal intervals (4 times in a day) for worms.

Crinum amoenum Roxburgh [Amaryllidaceae]

Vernacular Name: *Mosoi Sabrum* (Mech); Exscicattus: *Ajita & AP Das 76, 465*.

- In asthma of cows, about 1/3 roasted bulb is given to the cows with their food once in a day
- One bulb of *Crinum amoenum* and same quantity of tuber of *Amorphophallus bulbifer* are pounded and half of the paste is given orally to the cows in swelling of neck and the remaining part of paste is smeared on neck till cure
- One bulb is crushed and fed to the cow once in a day to prevent flatulence of stomach.

Curcuma longa Linnaeus [Zingiberaceae]

Vernacular Name: *Haldi* (Mech); Exscicattus: *Ajita & AP Das 466*.

10 gm rhizome is pounded and mixed with 1 tablespoon of lime and applied on body of fowls to cure body sore.

Cynodon dactylon (Linnaeus) Persoon [Poaceae]

Vernacular Name: *Duba Gang-se* (Mech); Exscicattus: *Ajita & AP Das 288*.

In body-sore of cattle, 25 gms of whole plant of *Cynodon dactylon* and 25 gm rhizome of *Curcuma longa* are pounded. The paste is smeared on infected area and tied the area with a cotton-rag and changed it every day continuously till cure.

Dryopteris filix-mas (Linnaeus) Schott [Dryopteridaceae]

Vernacular Name: *Saldaokhumai* (Mech); Exscicattus: *Ajita & AP Das 289*.

In incubation time of hens, fronds are kept around the hen for repelling insects.

Euphorbia hirta Linnaeus [Euphorbiaceae]

Vernacular Name: *Dudhali* (Mech); Exscicattus: *Ajita & AP Das 174*.

Leaves are fed to milking cows for improving lactation.

Euphorbia royleana Boissier [Euphorbiaceae]

Vernacular Name: *Sijou* (Mech); Exscicattus: *Ajita & AP Das 295*.

Latex is applied externally on the skin at the side of the affected eye(s) to cure ophthalmic cows.

Hibiscus sabdariffa Linnaeus [Malvaceae]

Vernacular Name: *Mistha Bingfang* (Mech); Exscicattus: *Ajita & AP Das 249*.

10 – 12 leaves are boiled in 1 bowl of boiled rice water and given orally to the cows twice daily for 4 – 5 days in dysentery.

Hydrocotyle sibthorpioides Lamarck [Apiaceae]

Vernacular Name: *Manimuni Galei* (Mech); Exscicattus: *Ajita & AP Das 291*.

Equal quantities of leaves of *Hydrocotyle sibthorpioides*, *Centella asiatica*, cinnamon and cardamom are pounded and heated and fed to the cow at morning and in the evening in pneumonia.

Jatropha curcas Linnaeus [Euphorbiaceae]

Vernacular Name: *Enda* (Mech); Exscicattus: *Ajita & AP Das 293*.

- Extract of stem bark is applied on the body of cows and buffaloes to cure skin sores.
- 5 – 6 drops of latex is dropped on to eyes of cows thrice daily in ophthalmia.

Justicia adhatoda Linnaeus [Acanthaceae]

Vernacular Name: *Chinchiri* (Mech); Exscicattus: *Ajita & AP Das 404*.

About 4 – 5 leaves are pounded and given to the cows twice daily to cure pneumonia.

Mimosa pudica Linnaeus [Mimosaceae]

Vernacular Name: *Sumukhchi* (Mech); Exscicattus: *Ajita & AP Das 059*.

Shoots are crushed and the extract is applied on wounds of cows thrice a day till cure.

Musa balbisiana Colla [Musaceae]

Vernacular Name: *Athia Thalith* (Mech); Exscicattus: *Ajita & AP Das 251*.

- Pseudostem is cut into small pieces and given to the cattle to prevent heatstroke.
- Three ripen fruits are peeled off and squeezed in 900 ml of water and fed to the cows thrice daily to check dysentery.

Nyctanthes arbor-tristis Linnaeus [Verbenaceae]

Vernacular Name: *Sephali Bibar* (Mech); Exscicattus: *Ajita & AP Das 292*.

Three tablespoons leaf extract is mixed with food and fed to the hens to cure fever.

Oryza sativa Linnaeus [Poaceae]

Vernacular Name: *Mairong* (Mech); Exscicattus: *Ajita & AP Das 296*.

Boiled rice water is sprayed in the fowl shed in incubation period for removing insects.

Paederia foetida Linnaeus [Rubiaceae]

Vernacular Name: *Khipi Bindong* (Mech); Exscicattus: *Ajita & AP Das 467*.

In case of flatulence of stomach of cows, few creepers are twisted and hung around the neck of the animal.

Pericampylus glaucas (Lamarck) Merrill [Menispermaceae]

Vernacular Name: *Nalithapa* (Mech); Exscicattus: *Ajita & AP Das 077*.

In case of hyper salivation of cows, 10 – 15 leaves are boiled in a bowl of water and the extract is given to the cows once in a day for 3 – 4 days.

Persicaria hydropiper (Linnaeus) Spach [Polygonaceae]

Vernacular Name: *Hatitika* (Mech); Exscicattus: *Ajita & AP Das 266*.

400 gm of leaves are rubbed on the body of cattle for removing lice.

Piper betle Linnaeus [Piperaceae]

Vernacular Name: *Phatai* (Mech); Exscicattus: *Ajita & AP Das 114*.

Three leaves and 50 gm of jaggery are crushed and fed to the cows thrice daily in stomachache.

Zingiber officinale Roxburgh [Zingiberaceae]

Vernacular Name: *Adi* (Mech); Exscicattus: *Ajita & AP Das 252*.

In indigestion of cows, 50 gm zinger rhizome, 25 gm ajowan and 25 gm black salt are pounded together and fed to the cows once in a day.

7.5.2. ANALYSIS OF PLANTS USED IN VETERINARY MEDICINES

The *Meches* have rich and unique traditional knowledge about the use of natural resources, particularly the biological resources available in their surroundings for the treatment of ailments of their domestic animals. According to the present study, the plant species are used traditionally against 23 types of animal diseases as vermicide, lactation enhancer, fertility inducer, repellent for body-lice and other insects, and against sore of tongue, skin diseases, dysentery, drowsiness and white stool, worms, asthma, swelling of neck, flatulence of stomach, body sore, ophthalmia, pneumonia, wounds, heatstroke, fever, hyper salivation, stomachache and indigestion. The efficacy of the methods of treatment appears to be quite satisfactory.

1. Diseases they treat: Out of 23 types of ailments of pets recorded to treat by the *Mech Ojas*, there are 2 formulations used as vermicide, using two species of plants, *Alstonia scholaris* and *Corchorus capsularis*. Accordingly, two each for lactation, repelling body-lice, dysentery, repelling insects, flatulence of stomach, body sore, ophthalmia, pneumonia and one each for sore of tongue sore, skin disease, drowsiness and white stool, fertility inducer, asthma, swelling of neck, wounds, heatstroke, fever, hyper salivation, stomachache and indigestion have been recorded.

2. Habit groups: The total number of plants used in veterinary purposes can be categorized in the following ways considering their habit groups: four tree species (*Alstonia scholaris*, *Annona reticulata*, *Azadirachta indica*, *Bambusa nutans*,) belonging four families i.e. Apocynaceae, Annonaceae, Meliaceae and Poaceae; four species of shrubs like *Euphorbia royleana*, *Jatropha curcas*, *Justicia adhatoda*, *Nyctanthes arbor-tristis* under three families, Euphorbiaceae, Acanthaceae and Verbenaceae; 18 species of herbs i.e. *Amaranthus spinosus*, *Amorphophallus bulbifer*, *Cannabis sativa*, *Centella asiatica*, *Colocasia esculenta*, *Corchorus capsularis*, *Crinum amoenum*, *Curcuma longa*, *Cynodon dactylon*,

Dryopteris filix-mas, *Euphorbia hirta*, *Hibiscus sabdariffa*, *Hydrocotyle sibthorpioides*, *Mimosa pudica*, *Musa balbisiana*, *Oryza sativa*, *Persicaria hydropiper*, *Zingiber officinale* belonging 12 families, Amaranthaceae, Cannabaceae, Araceae, Poaceae, Apiaceae, Tiliaceae, Amaryllidaceae, Zingiberaceae, Dryopteridaceae, Euphorbiaceae, Mimosaceae, Musaceae, Polygonaceae and 3 species climbers (*Paederia foetida*, *Pericampylus glaucas* and *Piper betle*) under 3 families, Rubiaceae, Menispermaceae and Piperaceae.

3. Plant parts used: An analysis of available data on the plants used as veterinary medicines have shown that leaves of 16 species (*Annona reticulata*, *Azadirachta indica*, *Bambusa nutans*, *Centella asiatica*, *Colocasia esculenta*, *Corchorus capsularis*, *Dryopteris filix-mas*, *Euphorbia hirta*, *Euphorbia royleana*, *Hibiscus sabdariffa*, *Hydrocotyle sibthorpioides*, *Justicia adhatoda*, *Nyctanthes arbor-tristis*, *Pericampylus glaucas*, *Persicaria hydropiper*, *Piper betle*) used are belonging to 14 families; rhizomes or corms of 3 species like *Amorphophallus bulbifer*, *Curcuma longa*, *Zingiber officinale* under 2 families; shoots of 3 species (*Amaranthus spinosus*, *Cannabis sativa*, *Mimosa pudica*) of 3 families; stem-barks of *Alstonia scholaris* and *Jatropha curcas*; petiole of *Colocasia esculenta*; bulb of *Crinum amoenum*; whole plant *Cynodon dactylon*; pseudostem and fruits of *Musa balbisiana*; twining shoot of *Paederia foetida* and grains of *Oryza sativa* are used.

4. Conclusion: People of *Mech* community keep many domestic animals. And, their traditional plant based medicines keeps these animals quite healthy. This clearly indicates the efficacy of such herbal medicines. The list of recorded plants also includes a good number of well-known medicinal plants. However, the other recorded plants can be the subject of modern research leading to the development of more effective and safer medicines.

7.6. Recorded Poisonous Plants

7.6.1. INTRODUCTION

Sometimes we also need to use some harmful materials. We manufacture lethal weapons not only to hunt for our food we also use those to save us from the enemies. In traditional societies, in addition to their comparatively much less dangerous weapons, they also use many plants for their different levels of toxicity and can be used as poison, which may be harmful or not to the human. However, for suicide activities people also need to use extremely poisonous plants.

The situation is not different in the *Mech* society too! During the ethnobotanical survey among the *Meches* the uses of some such poisonous plants also have been recorded. Those plants are enumerated below along with their local names, voucher specimens and mode of use as poison.

7.6.2. ENUMERATION OF PLANTS RECORDED FOR VETERINARY MEDICINES

Alstonia scholaris R. Brown [Apocynaceae]

Vernacular Name: *Sithaona* (Mech); Exsicattus: *Ajita & AP Das 030*.

About 30 kg of crushed stem-bark is mixed with the water in a small pond (*Hakhor*) for stupefying fishes.

Capsicum annuum Linnaeus [Solanaceae]

Vernacular Name: *Banzut* (Mech); Exsicattus: *Ajita & AP Das 184*.

Pounded fruit is used for poisoning arrow.

Careya arborea Roxburgh [Lecythidaceae]

Vernacular Name: *Khoom Bingfang* (Mech); Exsicattus: *Ajita & AP Das 463*.

Root and stem-barks are crushed in sufficient quantity (approx 5 – 6 kg) and mixed with pond water for stupefying fishes.

Costus speciosus (Koenig ex Retzius) Smith [Costaceae]

Vernacular Name: *Debgugri* (Mech); Exsicattus: *Ajita & AP Das 382*.

Sufficient quantity (approx 2 – 3 kg) of crushed rhizome is mixed with shallow water bodies (size 2 × 2 m) to stupefy fishes.

Datura metel Linnaeus [Solanaceae]

Vernacular Name: *Dotra* (Mech); Exsicattus: *Ajita & AP Das 074*.

Juice of ± 5 fruits and one cup of leaf-juice can create madness in people.

Derris polystachya Bentham [Fabaceae]

Vernacular Name: *Rhu* (Mech); Exscicattus: *Ajita & AP Das 472*.

1 kg stem-bark is crushed and mixed with stagnant water of forest streams (1 × 1 m) for stupefying fishes.

Diospyros malabarica (Desrousseaux) Kosteletsky [Ebenaceae]

Vernacular Name: *Gab* (Mech); Exscicattus: *Ajita & AP Das 345*.

Boiled fruits are used for trapping birds.

Fagerlindia fasciculata (Roxburgh) Tirvengadam [Rubiaceae]

Vernacular Name: *Maina* (Mech); Exscicattus: *Ajita & AP Das 169*.

12 – 15 kg of fruits are pounded and mixed in pond water for killing fishes.

Moringa oleifera Lamarck [Moringaceae]

Vernacular Name: *Sajna* (Mech); Exscicattus: *Ajita & AP Das 041*.

About 30 gm root extract is toxic for human health.

Murraya koenigii (Linnaeus) Sprengel [Rutaceae]

Vernacular Name: *Jafsri Bilai* (Mech); Exscicattus: *Ajita & AP Das 381*.

Aquous leaf extract is sprayed around homestead for repelling snakes.

Persicaria hydropiper (Linnaeus) Spach [Polygonaceae]

Vernacular Name: *Hatitika* (Mech); Exscicattus: *Ajita & AP Das 124*.

About 3 kg whole plants are crushed and mixed with pond water for stupefying fishes.

Plumbago zeylanica Linnaeus [Plumbaginaceae]

Vernacular Name: *Emao* (Mech); Exscicattus: *Ajita & AP Das 015*.

About 40 gm root extract is poisonous for human health.

Thevetia peruviana (Persoon) Schumann [Apocynaceae]

Vernacular Name: *Kholke Bibar* (Mech); Exscicattus: *Ajita & AP Das 464*.

Consumption of just 2 fruits is enough to develop harmful effects for human beings. It creates madness and can even cause death.

7.6.3. ANALYSIS OF RECORDED FOR VETERINARY MEDICINES

During the field survey, 13 species of poisonous plants belonging to 11 families were recorded. Such plants are harmful for human health and for other animals. Though the main occupation of *Mech* people is agriculture, fishing is an alternate source of income. They collect fish for food and also for sale in nearby markets. For stupefying and/or killing fishes either entire plants or certain part of plants as fish poison. Fishing is done by erecting a temporary wall with mud and stones or by diverting the water current they arrest the water for some smaller area in rivers/ streams/ ponds. The plants or plant parts are crushed and mix with the water. The fish poison makes the fish float in a stupefied state where they are captured

easily. Besides these, some plants are also used for hunting and bird trapping purposes. Even for committing suicide they use some plant parts.

7.6.3.1. Habit Groups: Out of the recorded species 6 belonging to 6 families are trees, like *Alstonia scholaris*, *Careya arborea*, *Derris polystachya*, *Diospyros malabarica*, *Fagerlindia fasciculata* and *Moringa oleifera*. Also, there are 5 species of shrubs from 4 families namely *Capsicum annum*, *Datura metel*, *Murraya koenigii* and *Plumbago zeylanica*, *Thevetia peruviana* and 2 species of herbs (*Costus speciosus* and *Persicaria hydropiper*) are also documented.

7.6.3.2. Useful Plant Parts: Leaves and fruits of *Datura metel*, root of *Moringa oleifera* and *Plumbago zeylanica* and fruits of *Thevetia peruviana* are poisonous for human health. Stem barks of *Alstonia scholaris*, *Careya arborea*, *Derris polystachya*; fruits of *Fagerlindia fasciculata*; roots of *Careya arborea*; rhizome of *Costus speciosus* and whole plant of *Persicaria hydropiper* are used for stupefying fishes. Boiled fruits of *Diospyros malabarica* are used as bird-trapping purposes. To drive out snakes, leaves of *Murraya koenigii* are very useful in *Mech* villages.

7.6.3.3. Conclusion: If a plant is poisonous then certainly there is one or more toxic chemical(s). In most of the cases, we know, these chemicals are also of medicinal importance. This is also reflected in the list of plants recorded here as all the recorded 13 species are recognized as medicinal plants too!

7.7. Preparation of *Jou* [Rice Beer]

7.7.1. INTRODUCTION

Jou is the elixir of life in the *Mech* society. It is a kind of Rice Beer and is prepared by most of the traditional communities at least in the Indian subcontinent (Ghosh & Das 2004). Duars can be regarded as the native place of several tribes such as *Mech*, *Rabha*, *Toto*, *Garo*, *Oraon*, *Munda* etc. The practice of consuming homemade liquor is immensely popular among them. Although the plant ingredients of the liquor made by different tribes vary widely but their starting material i.e. boiled rice (*Oryza sativa* Linnaeus of Poaceae) and the process of preparation remains same. This “Country Liquor” is popularly termed as *Jou* (by *Mech*), *Iu* (by *Toto*), *Chukor Muchi* (by *Rabha*), *Jhara* (by *Oraon*), *Haria* (by *Santal*) and *Badde* (by *Munda*).

The plant materials that have been incorporated in the preparation of starter mixture of rice beer have tremendous ethnomedicinal values in tribal communities (Jain 1991). A good number of people from these tribal communities are engaged in the preparation and marketing of rice beer. Not only that, use of these plants and the rice beer itself is related to different socio-cultural and religious occasions of tribes. They consume this beer in most of their social programs like marriage ceremony, celebration of childbirth etc.

Even today, most of the people of these tribal communities believe that they remain healthy by drinking rice beer regularly. Unfortunately, younger generations are more inclined towards the distilled products of rice beer that is with higher percentage of ethanol but without having the quality of its plant ingredients.

7.7.2. Ingredients:

Following is the list of materials used for making *Jou* by the people of *Mech* community:

1. *Plumbago zeylanica* Linnaeus; Plumbaginaceae (*Emao*) [Ajita & AP Das 015]: It is used for fermentation.
2. *Scoparia dulcis* Linnaeus; Scrophulariaceae (*Rakhep*) [Ajita & AP Das 014]: It produces sweetness.
3. *Clerodendrum viscosum* Ventenat; Verbenaceae (*Lakhna*) [Ajita & AP Das 016]: It produces slight bitter taste.
4. *Artocarpus heterophyllus* Lamarck; Moraceae (*Kanthal*) [Ajita & AP Das 017]: It increases sweetness.

5. *Dryopteris filix-mas* (Linnaeus) Schott; Dryopteridaceae (*Saldaokhumai*) [Ajita & AP Das 013]: It develops bitter taste.
6. *Oryza sativa* Linnaeus; Poaceae (*Mairong*) [Ajita & AP Das 296]: This is the main ingredient.

7.7.3. Preparation:

Preparation of Rice Beer has two distinct steps (i) Preparation of Starter Mixture and (ii) Fermentation of boiled rice (Ghosh & Das 2004).

7.7.3.1. Preparation of Starter Mixture: 1 kg of broken grains of *Oryza sativa*, 250 gm roots and shoots of *Plumbago zeylanica*, 100 gm shoots of *Scoparia dulcis*, 100 gm tender leaves of *Clerodendrum viscosum* and 50 gm tender leaves of *Artocarpus heterophyllus* and 10 gm young fronds of *Dryopteris filix-mas* are pounded together in a wooden mortar and made into powder. The powder are strained through a sieve and made into a paste with little water. The dough is then flattened into round discoid breads. These are kept within straw, covered with a jute rug. There the ferment grows in the breads for two days and the breads develop a dense mantle of white fungal hyphae. After two to three days the breads are brought out and dried hard under the direct sun. These breads are the *Emao*, the starter mixture. (Plate XIII, Figs. A – D).

7.7.3.2. Fermentation of Boiled Rice: For rice beer preparation, 2 kg rice is boiled with an amount of water that will dry up when the boiling will be over i.e. nothing is to be decanted. Boiled rice is spread on a bamboo plate to cool down and for little more drying. 200 gm of starter bread is powdered and then mixed with the boiled rice. The whole things are placed in a big metal container for fermentation. In winter the mix is kept for 7 – 8 days and in summer it becomes ready in 4 – 5 days. After the proper fermentation some amount of liquor is come out from the mix and the liquid is now strained. This liquor is *Jou*, the Rice Beer. (Plate XIII, Figs. E – H).

7.7.3.3. Differences: The materials and the methods followed by *Meches* is not exactly similar with that the methodology recorded by Ghosh & Das (2004) among the *Oraons* living in Duars. *Oraons* use some core plants those are must for the preparation of starter mixture. In addition to those they use some other modifier plants to develop a particular color or aroma or taste or for long time storage. In comparison to that *Meches* use much lesser number of plants and except the grains of *Oryza sativa* no other plant can be regarded as the core plant. *Oraons* always keep few pieces of dry chili and charcoal with materials from the stage of collection of raw herbage materials upto the final fermentation stage. They believe, this keeps away evil spirits which may interfere with the quality of the produces. However, it may be *Jou* or *Jhara*, the rice beer is much favorite for the people of both the communities.

PLATE XIII



Figs A. Grinding of plant materials, B. Sieving the powder, C. The prepared starters, D. Dried starter, E. Grinding starter added to the boiled rice, F. Placing the mixed rice in a container for fermentation, G. After fermentation the prepared liquor, H. Straining the liquid

7.8. Recorded Ornamental & Decorative Plants

7.8.1. ENUMERATION OF ORNAMENTAL AND DECORATIVE PLANTS

Generally the campus of a *Mech* household is neatly maintained. Each house of *Mech* is surrounded by a fence and almost all the families have their lands, some of which is used as garden. According to survey, 18 plants species covering 17 genera from 15 families are recorded which are used for garden decoration and ornamentation purposes. These are enumerated below.

Areca catechu Linnaeus [Arecaceae]

Vernacular Name: *Goy* (Mech); Exscicattus: *Ajita & AP Das 346*.

Trunk stripe is used for fencing purposes.

Bambusa nutans Wallich ex Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 012*.

Bamboo split is used as fence (*Tati*).

Cassia fistula Linnaeus [Caesalpiaceae]

Vernacular Name: *Dindong* (Mech); Exscicattus: *Ajita & AP Das 413*.

Deciduous ornamental small tree with beautiful foliage and flowers.

Catharanthus roseus (Linnaeus) G. Don [Apocynaceae]

Vernacular Name: *Nayantara* (Mech); Exscicattus: *Ajita & AP Das 188*.

Plant is grown in gardens

Costus speciosus (Koenig ex Retzius) Smith [Costaceae]

Vernacular Name: *Debgugri* (Mech); Exscicattus: *Ajita & AP Das 143*.

For ornamentation this plant is grown.

Crinum amoenum Roxburgh [Amaryllidaceae]

Vernacular Name: *Mosoi Sabrum* (Mech); Exscicattus: *Ajita & AP Das 076*.

Plants are grown for gardening purposes.

Gliricidia sepium (Jacquin) Walpers [Fabaceae]

Vernacular Name: *Benda Bimfang* (Mech); Exscicattus: *Ajita & AP Das 400*.

Planted along the fencing for its beautiful leaves and flowers.

Hibiscus rosa-sinensis Linnaeus [Malvaceae]

Vernacular Name: *Java* (Mech); Exscicattus: *Ajita & AP Das 397, 405*.

Grown in gardens for its beautiful flowers.

Ixora coccinea Linnaeus [Rubiaceae]

Vernacular Name: *Rangan Bibar* (Mech); Exscicattus: *Ajita & AP Das 137*.

Grown in gardens for its beautiful flowers.

Jatropha curcas Linnaeus [Euphorbiaceae]

Vernacular Name: *Enda* (Mech); Exscicattus: *Ajita & AP Das 406*.

Grown along the fencing (*Tati*).

Justicia adhatoda Linnaeus [Acanthaceae]

Vernacular Name: *Chinchiri* (Mech); Exscicattus: *Ajita & AP Das 404*.

Grown along the fences for its beautiful foliage and flowers.

Justicia gendarussa Linnaeus f. [Acanthaceae]

Vernacular Name: *Jatrashi* (Mech); Exscicattus: *Ajita & AP Das 403*.

Grown along the fences for its beautiful foliage and flowers.

Kalanchoe pinnata (Lamarck) Persoon [Crassulaceae]

Vernacular Name: *Oatkhambra* (Mech); Exscicattus: *Ajita & AP Das 411*.

Grown in gardens for its beautiful succulent leaves and flowers.

Malvaviscus arboreus Cavan [Malvaceae]

Vernacular Name: *Banjut Java* (Mech); Exscicattus: *Ajita & AP Das 401*.

Grown in gardens for its beautiful flowers.

Mirabilis jalapa Linnaeus [Nyctaginaceae]

Vernacular Name: *Mana-bai -ni Bibar* (Mech); Exscicattus: *Ajita & AP Das 398*.

Grown in gardens for its beautiful flowers.

Polyalthia longifolia (Sonnerat) Thwaites [Annonaceae]

Vernacular Name: *Debbaru* (Mech); Exscicattus: *Ajita & AP Das 136*.

Leaves are used for decoration.

Sansevieria trifasciata Prain [Dracaenaceae]

Vernacular Name: *Jibou Bilai* (Mech); Exscicattus: *Ajita & AP Das 452*.

Succulent ornamental herb.

Thevetia peruviana (Persoon) Schumann [Apocynaceae]

Vernacular Name: *Kholke Bibar* (Mech); Exscicattus: *Ajita & AP Das 395*.

For its beautiful leaves and flowers; generally grown near the religious sites.

7.8.2. ANALYSIS OF RECORDED DECORATIVE AND ORNAMENTAL PLANTS

Out of 18 species four are trees (*Areca catechu*, *Bambusa nutans*, *Cassia fistula*, *Polyalthia longifolia*) from 4 families; 10 species are shrubs (*Catharanthus roseus*, *Gliricidia sepium*, *Hibiscus rosa-sinensis*,

Ixora coccinea, *Jatropha curcas*, *Justicia adhatoda*, *Justicia gendarussa*, *Kalanchoe pinnata*, *Malvaviscus arboreus* and *Thevetia peruviana* belonging 7 families and 2 species of herbs i.e. *Mirabilis jalapa* and *Sansevieria trifasciata* from 2 families and 2 species of geophytes e.g. *Costus speciosus* and *Crinum amoenum* belonging to 2 families are documented.

For fencing the house campus, *Areca catechu*, *Bambusa nutans*, *Gliricidia sepium*, *Jatropha curcas*, *Justicia adhatoda*, *Justicia gendarussa* etc. are grown. Twigs of *Polyalthia longifolia* are used for decoration in ceremonies. Some plants like *Cassia fistula*, *Catharanthus roseus*, *Costus speciosus*, *Crinum amoenum*, *Hibiscus rosa-sinensis*, *Ixora coccinea*, *Kalanchoe pinnata*, *Malvaviscus arboreus*, *Mirabilis jalapa*, *Sansevieria trifasciata* and *Thevetia peruviana* are grown in garden for their beautiful flowers, leaves and foliage.

Again, it can also be realized that only except three (*Costus speciosus*, *Crinum amoenum* and *Cassia fistula*) of the recorded 18 species all are grown with purpose. And, of these at least ten species (*Catharanthus roseus*, *Gliricidia sepium*, *Hibiscus rosa-sinensis*, *Jatropha curcas*, *Justicia gendarussa*, *Kalanchoe pinnata*, *Malvaviscus arboreus*, *Mirabilis jalapa*, *Sansevieria trifasciata* and *Thevetia peruviana*) are exotics. There are numerous other beautiful plants in the surrounding forests but they do not use those for decoration. From this habit appears that they have selected these plants mostly by observing the local Bengali community who uses quite a large number of plant species for this purpose.

7.9. Religious Plants

7.9.1. ENUMERATION OF RECORDED RELIGIOUS PLANTS

People of *Mech* community are the followers of *Bathou* religion. Their place of worship is of two types: (i) Every house has its own *No-ma-no* (= temple); and (ii) for the community there is *Thansali*. At both the places they grow at least one plant of *Euphorbia royleana* (*Sijou*) and some plants of *Justicia gendarussa* (*Jatrashi*) are also grown near by. In addition to these two plants they use some other plants too for different religious purposes and are enumerated bellow:

Aegle marmelos (Linnaeus) Correa [Rutaceae]

Vernacular Name: *Bel Bilai* (Mech); Exscicattus: *Ajita & AP Das 042*.

Leaves are use in different religious ceremonies.

Areca catechu Linnaeus [Arecaceae]

Vernacular Name: *Goy* (Mech); Exscicattus: *Ajita & AP Das 346*.

Nuts are used for different religious purposes.

Bambusa nutans Wallich *ex* Munro [Poaceae]

Vernacular Name: *Ooa* (Mech); Exscicattus: *Ajita & AP Das 012*.

In different religious ceremonies bamboo is used.

Bambusa tulda Roxburgh [Poaceae]

Vernacular Name: *Jati Ooa* (Mech); Exscicattus: *Ajita & AP Das 383*.

Bamboo is used in *Kherai Sibinai*.

Bombax ceiba Linnaeus [Bombacaceae]

Vernacular Name: *Simul* (Mech); Exscicattus: *Ajita & AP Das 099*.

Floss is used in various ceremonies.

Calamus erectus Roxburgh [Arecaceae]

Vernacular Name: *Raidong* (Mech); Exscicattus: *Ajita & AP Das 384*.

Whole plant is useful in *Kherai Phunai*.

Catharanthus roseus (Linnaeus) G. Don [Apocynaceae]

Vernacular Name: *Nayantara* (Mech); Exscicattus: *Ajita & AP Das 188*.

For worshipping deities flowers are used.

Cicer arietinum Linnaeus [Fabaceae]

Vernacular Name: *But* (Mech); Exscicattus: *Ajita & AP Das 399*.

Seed is offered to the deities during worship.

Clerodendrum viscosum Venttenat [Verbenaceae]

Vernacular Name: *Lakhna* (Mech); Exscicattus: *Ajita & AP Das 386*.

Leaves are used in *Kherai Phunai*.

Corchorus capsularis Linnaeus [Tiliaceae]

Vernacular Name: *Phatto* (Mech); Exscicattus: *Ajita & AP Das 387*.

Jute stick is used in different ceremonies.

Cucumis sativus Linnaeus [Cucurbitaceae]

Vernacular Name: *Gumbri* (Mech); Exscicattus: *Ajita & AP Das 388*.

Fruit is offered to the deities during worship.

Cynodon dactylon (Linnaeus) Persoon [Poaceae]

Vernacular Name: *Duba-gangse* (Mech); Exscicattus: *Ajita & AP Das 054*.

Twigs are useful for different religious ceremonies.

Euphorbia royleana Boissier [Euphorbiaceae]

Vernacular Name: *Sijou* (Mech); Exscicattus: *Ajita & AP Das 010*.

Sijou is the symbol that implies *Bwrai Bathou*, the main God.

Gliricidia sepium (Jacquin) Walpers [Fabaceae]

Vernacular Name: *Benda Bimfang* (Mech); Exscicattus: *Ajita & AP Das 400*.

Two bundles containing rice beer and offerings suspended on two sides (*Ban-dingdong*) of a rod made from the branch of this plant and is carried by a porter in *Gami Madai-phunai* (Worship of Village God).

Gmelina arborea Roxburgh [Verbenaceae]

Vernacular Name: *Gambri* (Mech); Exscicattus: *Ajita & AP Das 389*.

Stools made of its timber are useful in *Kherai Phunai*.

Hibiscus rosa-sinensis Linnaeus [Malvaceae]

Vernacular Name: *Java* (Mech); Exscicattus: *Ajita & AP Das 397, 405*.

Flowers are used for worshipping of deities.

Justicia gendarussa Linnaeus f. [Acanthaceae]

Vernacular Name: *Jatrashi* (Mech); Exscicattus: *Ajita & AP Das 011*.

For worshipping *Bathou* God, shoots are used for making sanctified water.

Malvaviscus arboreus Cavan [Malvaceae]

Vernacular Name: *Banjut Java* (Mech); Exscicattus: *Ajita & AP Das 396*.

Flowers are used in religious ceremonies.

Mirabilis jalapa Linnaeus [Nyctaginaceae]

Vernacular Name: *Mana-bai -ni Bibar* (Mech); Exscicattus: *Ajita & AP Das 398*.

Flowers are used for worshipping deities.

Musa balbisiana Colla [Musaceae]

Vernacular Name: *Athia Thalith* (Mech); Exscicattus: *Ajita & AP Das 408*.

Leaves, leaf sheaths, pseudostem and fruits are used in different rituals. Whole plant and pseudostem are also used for ceremonial decorations.

Ocimum tenuiflorum Linnaeus [Lamiaceae]

Vernacular Name: *Tuhutsi* (Mech); Exscicattus: *Ajita & AP Das 013*.

Leaves are used for worshiping of deities.

Oryza sativa Linnaeus [Poaceae]

Vernacular Name: *Mairong* (Mech); Exscicattus: *Ajita & AP Das 409*.

Paddy- grains, with and without husk, are used in most of the religious ceremonies.

Phragmites karka (Retzius) Trinius ex Steudel [Poaceae]

Vernacular Name: *Khangkhla* (Mech); Exscicattus: *Ajita & AP Das 390*.

Whole plant is necessary in *Kherai Phunai*.

Piper betle Linnaeus [Piperaceae]

Vernacular Name: *Phatai* (Mech); Exscicattus: *Ajita & AP Das 159*.

Leaves are used in marriage and death ceremonies and also for offerings.

Premna bengalensis C.B. Clarke [Verbenaceae]

Vernacular Name: *Babol* (Mech); Exscicattus: *Ajita & AP Das 271*.

Whole plant is being worshipped as *Hagra Madai* (Forest God).

Psilanthus bengalensis (Schultes) Leroy [Rubiaceae]

Vernacular Name: *Hagrani Bibar* (Mech); Exscicattus: *Ajita & AP Das 385*.

Flowers are used for worshipping.

Saccharum spontaneum Linnaeus [Poaceae]

Vernacular Name: *Gigab* (Mech); Exscicattus: *Ajita & AP Das 048*.

For worshipping *Bathou* whole plant is used.

Shorea robusta Roxburgh ex Gaertner f. [Dipterocarpaceae]

Vernacular Name: *Sal-dom-phang* (Mech); Exscicattus: *Ajita & AP Das 391*.

The resin obtained from the bark is used as incense in religious ceremonies.

Tabernaemontana divaricata (Linnaeus) Roemer & Schultes [Apocynaceae]

Vernacular Name: *Gapht Bibar* (Mech); Exscicattus: *Ajita & AP Das 392*.

Flowers are used in many religious ceremonies.

Tagetes patula Linnaeus [Asteraceae]

Vernacular Name: *Genda* (Mech); Exscicattus: *Ajita & AP Das 410*.

Flowers are used for worshipping of deities.

Thevetia peruviana (Persoon) Schumann [Apocynaceae]

Vernacular Name: *Kholke Bibar* (Mech); Exscicattus: *Ajita & AP Das 395*.

Flower is used for worshipping deities.

Vigna mungo (Linnaeus) Hepper [Fabaceae]

Vernacular Name: *Sabai Gwchhwu* (Mech); Exscicattus: *Ajita & AP Das 393*.

Seeds are the offerings for *Maigaijennaini Sibinai* (paddy sowing ceremony).

7.9.2. ANALYSIS OF RECORDED RELIGIOUS PLANTS

The present survey recorded a total of 32 species of angiospermic plants, covering 31 genera and 19 families used as religious plants by the people of *Mech* community.

The habit-group distribution of recorded religious plants has been analyzed in Table 7.9.1.

Table 7.9.1. Habit group distribution of religious plants.

Habit-group	Taxa		
	Family	Genus	Species
Tree	8	9	9
Shrub	8	10	10
Herb	5	9	9
Climber	3	3	3
Geophyte	1	1	1
Total recorded species:			32

As far as I have realized, *Euphorbia royleana*, is the most religious plant for the believers of *Bathou* religion. They generally grow one plant of *Euphorbia royleana* in one corner of their premises where they warship their God.

The plants recorded here as religious plants includes *Aegle marmelos*, which is not only one important medicinal plant, it is also treated as religious by different communities in the Indian subcontinent. In addition, flowers of the plants like *Tagetes patula*, *Tabernaemontana divaricata*, *Malvaviscus arboreus*, *Hibiscus rosa-sinensis*, *Catharanthus roseus* and *Thevetia peruviana* are used to please the deity by wide array of people. Also, the fruits, shoot and/ or leaves of the plants like *Cynodon dactylon*, *Ocimum tenuiflorum*, *Areca catechu*, *Piper betle*, *Vigna mungo* and *Oryza sativa* are also used for warship. However, plants like *Musa balbisiana*, *Cicer arietinum*, *Shorea robusta* and *Bambusa spp.* are also used in different religious acts by different sections of people in the subcontinent. Remaining

plants recorded here are probably coming here probably due to their easy availability in the local vegetation. It is interesting to note the use of *Justicia gendarussa* is one introduced garden plant and is now become an important plant in the religious activities of *Mech* people.

Again, plants like *Mirabilis jalapa*, *Tagetes patula*, *Thevetia peruviana*, *Hibiscus rosa-sinensis*, *Gliricidia sepium*, *Corchorus capsularis*, *Catharanthus roseus* and *Areca catechu* are not local plants and are introduced here mostly from other phytogeographical regions. It is also interesting to note that most of these plants, especially *Tagetes patula*, *Thevetia peruviana*, *Mirabilis jalapa*, *Hibiscus rosa-sinensis*, *Catharanthus roseus* and *Areca catechu* are widely used for pleasing deities in the indian subcontinent. However, the list of recorded plants does not include any RET plant.

7.10. Plants Related to Birth, Marriage & Death

There are three major incidents in the life of a man. These are (i) Birth, (ii) Marriage and (iii) Death. Birth related to the appearance, marriage to the maturity including the initiation of reproductive life and, finally, life is completed through the death. Traditional societies use many plants during all three incidents of life and majority of these are ritualistic (Rai *et al* 2007).

7.10.1. BIRTH

Birth of a child is very important for the society in any continuity in any part of the world. It is, therefore, is also considered as very important incident in different ethnic communities. Every ethnic group has its own way of celebrating or performing rituals of the childbirth and it is true with the *Mech* community too! The *Mech* people have divided the phase of the childbirth or the ritual associated with it into the following phases:

- a. Pregnancy
- b. Delivery
- c. Cutting of the umbilical cord
- d. Removal of placenta
- e. First bath of the newborn
- f. First bath of mother after delivery
- g. Felicitating the older women of the village who were present during the birth
- h. Naming the child
- i. Head shaving

7.10.1.1. Pregnancy

During pregnancy the woman is not allowed to go out alone on Tuesday and Saturday, these days are looked upon as inauspicious. However, there is no other restriction. On the third day of every bright fortnight of the moon, the woman must bathe in the afternoon, put on a washed clean cloth, take some sun dried rice, *Duba-gangse* (*Cynodon dactylon*), a few *Tulutsi* (*Ocimum tenuiflorum*) leaves and some water in her hands and sprinkle those around every hut and on the yard from the *Bathou* (*Euphorbia royleana*) plant up to the hut of the *Mainou* (The goddess of wealth). This

ritual is called '*Doi-gothar-satno*'. This must continue up to the day of the delivery. It is believed that this custom will ward off all evil spirits and make a safe delivery.

7.10.1.2. Delivery

Generally after 9 months and 10 days or 280 days woman gives birth to the baby. *Mech* people use the technique of holding the wooden mortar (*Ooal*) during the labor, following which birth is given.

After the delivery the unconscious child is brought to consciousness by making the noise of the beating plates or plough. Immediately after the delivery the starter (rice ball, which is used to make traditional rice beer) is given to the mother. The *Mech* people believe that this will avoid the weakness and other reactions in mother's body. In olden days the people used to cut an egg on top of the rice ball, this ritual is still maintained in many interior villages. By doing this, they believe that if the egg is cut into two halves the labor time will be shorter, if the egg is cut into 1/3 then delivery time will be longer. In *Mech* language it is called "*Khira fornai*" (taking oath).

In the *Mech* culture it is believed that when the child is born with umbilical cord tied on the neck he/she is believed to be from previous Brahman caste. It is believed that he/she will be vegetarian when he/she grows older. When the newborn is born on Tuesday or Saturday it is believed that whatever curse he says to others it will be notorious or the curse he gives to others it will be materialized. To overcome this child is made to lick the soil. When the child is born from the feet it is said to be *Uta Nadi*. They believe that when the field is irrigated from the washed water of their feet, this water is said to have insecticidal property.

7.10.1.3. Cutting of the Umbilical Cord

Before cutting the umbilical cord, the newborn's mouth is cleaned from the secretions of the uterus as this is believed to cause cough and asthma. After the cleaning is completed the umbilical cord is cut. First it is cut with the help of sharp edged slip of green bamboo (*Bambusa nutans*) skin (*Ooa-shothing*) by pulling upward and cut end of the cord is tied with a cotton or jute or *Muga* silk thread (*Phun-dung*). It is not boiled but simply washed with cold water. Some dried earth or ash made by burning straw is sprinkled on the cut surface as an antiseptic. The woman acting as midwife of the community will perform this act. Bamboo knife is used as it is thought to be antiseptic. Now-a-days most of the delivery is done in the hospital but still in remote villages the labor is done at the home. After this, the midwife takes some *Duba-gangse* and *Tulutsi* leaves and puts those in a pot of water. She sprinkles this holy water on all persons in

the room and on all sides of the room. After the sprinkling of water the women are purified. After the delivery the amniotic sac is buried.

7.10.1.4. Removal of Placenta

The placenta after delivery is believed to be dangerous among the *Meches*. They believe that it should be removed within 2 – 10 minutes otherwise, when it takes longer time it will go to heart and it can be life threatening to the woman in labor. That is why there is a saying among *Meches*, “Male dies in hunting or by the enemy and the women dies in pregnancy or in the labor”.

Therefore, to ease the labor or to extricate the placenta, *Meches* give certain herbal mix to the laboring woman. The mix contains three fallen leaves of *Ocimum tenuiflorum* (*Tulutsi*) and three flowers of *Musa balbisiana* (*Athia Thalith*) are added to a bowel of especially collected water. They put a sphere on the straw roof of a hut. Then some amount of water is poured on it. When the water roll down from the roof of the hut they collect it in a bowel and the *Tulutsi* leaves and *Athia Thalith* flowers are the added to that. This water is then given to the laboring woman. Apart from this the hair of the laboring women is put in her mouth; this is believed to help to extricate the placenta.

After the delivery the mother is given new *Dokhna* (cloth) and she is made to sit on the straw so that the heel of her feet will not touch the vagina as because it is believed that this may cause the disease called ‘*Hauwala*’ (development of infection lesions in vagina). After the birth there is a ritual of feeding rice to the mother.

7.10.1.5. First Bath of the Newborn

After cutting of the umbilical cord there is a ritual of giving bath to the newborn. First the water is taken in the pot in which *Tulutsi* leaves are put along with the Herbal Medicine (10 twigs of *Cynodon dactylon* and 2 cm rhizome of *Curcuma longa* are crushed) and with this water baby takes its first bath.

7.10.1.6. Laying the Child on Winnower

There is a ritual among the *Meches* of laying the child on the winnower for sleep made up of Bamboo (generally of *Bambusa tulda*), so as to avoid septic form the cutting of umbilical cord besides the bark of Bamboo acts as coagulant of blood and it also heals the wound. This proves the scientific attitude of the *Mech* people. Besides, the *Mech* people believe that keeping some

materials beside the baby like nettle, winnower, the Bamboo made fish anchor etc the midwife can't do anything wrong.

7.10.1.7. Bath of the Mother after Giving Birth

After delivering the child there is the ritual of giving bath to the mother in river or in the dug-well. While taking her for the bath, the older woman of the community carries simul-floss (*Bombax ceiba*), sickle, rice (*Oryza sativa*), one pair nuts of *Areca catechu* (*Goy*), one pair of leaves of *Piper betle* (*Phatai*), leaves of *Musa balbisiana* (*Athia Thalith*), leaves of *Ocimum tenuiflorum*, thread etc. On bank of the river a dome is made with the sand. On the sickle a thread is tied and above it three pieces of cotton are tied and it is buried in the soil.

On top of the dome a banana leaf is kept, on which betel-nut, little amount of rice is kept and prayer is done to the River. There is the spiritual reason for keeping 3 cotton pieces on the top; which represent geologically heaven, universe and hell respectively.

Finally, water with Basil leaves is poured in the dome and offer *Namaskar*. Then the bathing is done and the mother is given new *Dokhna* (cloth) after which she returns to her home.

7.10.1.8. Putting the Child in Own Caste

After giving bath to both, mother and the child, there is the ritual of putting both of them in their own caste or community (Plate XIV, Fig. A). During this ritual a Banana leaf is taken in which a pair of betel-nuts along with some rice is also taken. Into this a little basil water is put and if the child is a boy a cock or if a girl then a hen is sacrificed in the name of their ancestors.

After that a curry is made up with the sacrificed fowl and some plants like *Xanthosoma brasiliense* (*Dudhali Thadung*) or *Euphorbia hirta* (*Dudhali*) and given to the mother. On the second day the same plant is used to make meal of *Cherenga* fish (*Channa punctatus* Bloch). This will help to increase milk production in the lactating mother. Here the *Mech* people used the plant as herbal medicine.

7.10.1.9. Felicitating the Older Woman of the Community

Among the *Meches* there is a ritual of felicitating the old lady who was present during the childbirth. In *Mech* language this is called *Burai-buraikhau*. The meaning of which is felicitating the old woman. This is a very important and necessary way of purification, without this that home is said to be impure. Until such purification the prayer is not done in that home.

7.10.1.10. Naming the Child

During the above-mentioned ritual an old lady (any person related to the family) gives name to the child. The *Meches* do not follow the *Hindu* way of naming. They name the child in accordance to his/her character, colour of the skin, crying, smiling, tall or dwarfness, thinness, day of birth etc. e.g., the child who often cries: *gabakho-gabakheli*, dwarf: *haytha*, like wise *Khanda-khandi*, *langa-langi*, *budbar-budhabari* etc. But in today's scenario naming is done by seeing the horoscope.

7.10.1.11. Head Shaving

This important ritual is done for the boys only. When the child becomes 4 or 5 years old this ritual is then performed.

This ritual is not synonymous with the *Hindu* ritual. Among the *Hindus* the *Brahmins* does everything of this ritual, but among the *Meches* boys's maternal uncle (*Mama*) does everything.

On the first day of the ritual boy's parents buy new cloths, scissors, comb and mirror. On the next day of ritual uncle cuts the boy's hair by scissors, sometimes he cuts the hair completely or in other cases, after the initial cutting, a barber performs the rest of the job. After this, maternal uncle (*Mama*) gives new cloth, plate and pitcher and if possible a cow is also given to his nephew. After the ritual is over there is the convention of offering feast to the neighbors and people of his community who are invited for the ritual and this culminates the entire process.

7.10.1.12. List of Plants Used during the Process

Cynodon dactylon (Linnaeus) Persoon [Poaceae]

Ocimum tenuiflorum Linnaeus [Lamiaceae] (Plate XIV, Fig. B)

Euphorbia royleana Boissier [Euphorbiaceae]

Musa balbisiana Colla [Musaceae]

Bambusa tulda Roxburgh [Poaceae]

Bambusa nutans Wallich ex Munro [Poaceae]

Bombax ceiba Linnaeus [Bombacaceae]

Oryza sativa Linnaeus [Poaceae]

Areca catechu Linnaeus [Arecaceae]

Piper betle Linnaeus [Piperaceae]

7.10.2. MARRIAGE (*Haba*)

The second important stage of life is marriage. In *Mech* society the boys generally get married at the age of 25 – 26 and the girls marries at around 20 or 21. By marriage the couple is in now entering into the reproductive stage of their lives. It is one social event through which the society accepted a newly formed family before which they were unrelated.

The entire event of marriage can be divided into five stages –

- (i) *Bangkon Hanai* (Proposal)
- (ii) *No-nay-nay* (Observing groom's house)
- (iii) *Ban Hanai* or *Akhtam Ganhani* (Engagement)
- (iv) *Haba* (Marriage Ceremony) and
- (v) *Ankham Jahanai* (Eight days ceremony).

7.10.2.1. *Bangkon Hanai* (Proposal)

Bangkon is of two types. Proposal of marriage is considered after obtaining verbal consent from both the girl and boy's family through the matchmaker, called *Bari-khitao*. The matchmaker with guardian of the boy or some co-villagers visits the house of prospective bride. A plot of land at the outer courtyard of the bride's house where the *Bathou* (*Euphorbia royleana*) has been grown is now cleaned and smeared with cow dung emulsion. One rupee coin, one pair leaves of *Piper betle* (*Phatai*), one pair nut of *Areca catechu* (*Goy*) and some flowers are bundled with leaf of *Musa balbisiana* (*Athia Thalith*) and are kept in front of the *Euphorbia royleana*.

Another *Bangkon* is – without taking the help of a matchmaker the guardians of the groom go the prospective bride's house as guest and any metal ring is hung on the northern wall of house secretly. After departing of groom's family, the guardians of bride understand the purpose of guest's coming.

If the bride's family is not inclined to accept the proposal, they return the token coin. If the coin is not returned, the marriage must take place and the elders will have it done.

7.10.2.2. *No-nay-nay* (Observing groom's house)

Next custom is *No-nay-nay*. Mother of bride or guardian and co-villagers go to the groom's house for observing the groom's family and house. The guardians of the groom welcome them, offer good food and supply plenty of *Jou* (Rice beer) to drink. Before departing from the groom's house, a custom is done, called *Rupa-hase-nai*. The final proposal is accepted through this

custom. In this custom one or two coins, sun dried rice, *Duba-gangse* (*Cynodon dactylon*), flowers etc. are bundled with plantain leaf and keep it in front of *Euphorbia royleana* as a symbol.

7.10.2.3. *Ban Hanai* or *Akhtam Ganhani* (Engagement)

For fixing the final date of the marriage, the father of the boy with his friends, *Bari-khitao* (matchmaker) go to the girl's house with areca nuts, betel leaves and rice beer. On this day the elders of the village of the bride also accompany. A discussion regarding the bride price (dowry) and other expenses of the marriage follows. It is a long drawn process, the *Bari-khitaos* of both sides move from one party to another to for an amicable settlement. When it is finally settled, the father of the boy blesses the girl put paddy, rice and twigs of *Cynodon dactylon* on her head. Hence the marriage day is finally fixed.

7.10.2.4. *Haba* (Marriage Ceremony)

The process of *Haba* includes the following –

7.10.2.4.1. Invitation: A few days before the marriage, the ladies of the groom's family visit the houses of co-villagers and their relatives with a trayful of betel leaves and areca nuts. To each family they give two leaves and two nuts as token of invitation to the marriage. Invitation from the bride's house is made in the same way. All the members of each family are thus invited.

7.10.2.4.2. Ritual: Marriage ceremony may be completed in the bride's house or in the groom's house. In case of groom's house, on the fixed day the groom's villagers come to the village of bride along with *Bairathis* (a few ladies of the bride's house and a few of the groom's house together form the *Bairathis*, they are entrusted with the rituals of the marriage) for ceremonial march of the bride to the groom's house. They are received formally. Certain social obligations and religious formalities are observed. The bride comes out from the house accompanying the bride's party to the village of the bridegroom. After leaving father's home, the bride's party marches to the village of bridegroom. At the entrance of the groom's house the *Barlangfas* and *Bairathis* dance to receive bride. Before entry into the courtyard of the bridegroom's house, the mother of the groom or any elder women relative welcome the bride by washing the feet of bride and take her into the hut of *Mainao* (Goddess) as the future Laxmi of the house is about to come.

On the other hand, if the groom comes to the bride's house, the groom with a party goes to the bride's house with areca nuts, betel leaves, two pitchers containing rice beer and sun dried

rice suspended on two sides (*Ban-dingdong*) of a rod (which is made of split-bamboo, especially *Bambusa tulda*) and carried by a porter. The party is welcomed by showering sun-dried rice over them. They are led into the house, given betel leaves and areca nuts and rice beer.

7.10.2.4.3. Marriage Site: A plot of land at the outer courtyard of the house where the *Bathou* (*Euphorbia royleana*) is situated is cleaned and smeared with cow dung emulsion. This is the marriage site (Plate XIV, Fig. C). Two *Bairathis* receive the bride and groom with carrying *Sailon* (a wickerwork of split *Bambusa nutans* culms) (Plate XIV, Fig. D), a tray containing a few lamps, areca nuts, betel leaves, sun-dried rice and unripe banana. They move five times anticlockwise round the *Bathou* while the *Bairathis* shower sun-dried rice over them. After moving, the bride and the groom sit in front of the *Bathou* on a *Khamflai* (flat wooden stool) at a short distance from the priest (Plate XIV, Fig. E). Then the priest starts chanting *Mantra*.

During and after the marriage some elderly ladies and girls dance *Mashanay* (peacock dance) in front of the *Bathou* (*Euphorbia royleana*) accompanied with bamboo flute, stringed instruments and small metal cymbals till all are called for dinner.

7.10.2.4.4. After the Marriage: If the marriage is held on the bride's home, the bride after arriving at the groom's house is led into the northern hut (*No-ma-no*) to rest. Two bamboo made pitchers full of water (*Doi-hachung*) are kept at the gate of the northern hut. The bride while entering the hut topples the pitchers with her left leg. Then the bride enters the room of the hut. The bridegroom takes his seat on the verandah of the northern hut with his friends.

The groom hides with him a small bundle (*Gay-thao*) containing five betel leaves and five areca nuts. The *Bairathis* snatch away the bundle from the groom and chew the contents. The bride is then taken out of the hut and both stand in front of the *Euphorbia royleana*. The priest (*Oja*) utters incantations. After the *Oja* has finished, the groom salutes the *Euphorbia royleana* and then the bride salutes by bending her head to the ground. The bride is again led into the northern hut. Now, the marriage feast begins. After the feast both the bride and groom are seated at the middle of the inner yard. The groom's parents and then others bless the couple and offer gifts. The formal marriage is thus completed.

7.10.2.4.5. Daujurun Khutnay (Rice distribution ceremony): Next day, a special curry (*Ondla*) of the powdered rice without any spice is cooked by the bride. This is mixed with all foods. The

elders and the relatives are invited. She distributes some food to all the invitees. And, thus she is admitted into the society.

7.10.2.4.6. Ankham Jahanai (Eight days ceremony): On the eighth day after marriage the bride and the groom go to the bride's house. There is no special ceremony attached to this.

7.10.2.5. Botany of the Marriage Ceremony

Through the entire process of marriage following plants and plant-parts are used –

- i. *Areca catechu* Linnaeus [Arecaceae]: stones from the fruits
- ii. *Bambusa nutans* Wallich ex Munro [Poaceae]: culm (Plate XIV, Fig. F)
- iii. *Bambusa tulda* Roxburgh [Poaceae]: culm
- iv. *Cynodon dactylon* (Linnaeus) Persoon [Poaceae]: twigs
- v. *Euphorbia royleana* Boissier [Euphorbiaceae]: one grown plant
- vi. *Musa balbisiana* Colla [Musaceae]: leaves
- vii. *Oryza sativa* Linnaeus [Poaceae]: grains (with and without husk)
- viii. *Piper betle* Linnaeus [Piperaceae]: leaves

Apart from these the generous supply of *Jou* is also very important which a fermented plant product is entirely. The preparation of *Jou* has been discussed in a separate chapter and quite a few plants are used for its preparation.

However, out of the directly used seven species of plants most important is *Euphorbia royleana* as the bridegroom takes oath considering the plant as God or the deity. Next to it there are two plants of equal importance, *Areca catechu* and *Piper betle*. The betel-nut and betel-leaves are of much religious and social importance. The combination of these two speaks so many things including 'invitation', 'blessings', 'acceptance' etc. Rice grains (with and without husk) and the twigs of *Cynodon dactylon* are of religious importance and are used mainly for blessings. Split bamboo is used mainly for making different types of baskets for carrying different types of article at different stages of the entire event.

Out of these seven plants *Areca catechu*, *Bambusa tulda*, *Musa balbisiana*, *Oryza sativa* and *Piper betle* are important useful plants and all cultivated widely and commercially extremely important. So, it is natural that such important plants will occupy some important positions in social customs. In addition, *Cynodon dactylon* and *Euphorbia royleana* are also important as both of those are important medicinal plants in Mech traditional system of medicines.

7.10.3. DEATH

The life of a man starts with the fusion of two gametes in mother's womb and ends with his death. While birth is a welcome event of life, the death is a sad event when we need to loose one person from our family or, in other words, from our society. When we can predict the tentative date of birth, it may not be possible to predict any such death in most of the cases.

7.10.3.1. Announcement of Death

Death is announced when the *Oja* declares that the soul has left the body. When the *Oja* is far away and cannot be called immediately, the stoppage of breathing signifies the death.

After death, body is taken out of the house a woman sprinkles the emulsion of fresh cow dung at the place of the yard where the body was placed before carrying and along the probable path in which the corpse will be carried away with the idea to prevent the spirit of the dead to come back home following that way. The body is kept on a bamboo made, *Chirin*, with head directed to south and face and feet to the north. It is their belief that by keeping so the spirit from the dead person will see the *Kailas* Hill of the Himalayas and the legs will carry him straight to that hill. The body is kept covered with a white cloth (*Hisha-lu*) and flowers (Plate XIV, Fig. G).

After this, the relatives of the dead person are given a few drops of 'Holy Water' to the mouth of the body to purify the soul. Leaves of *Ocimum tenuiflorum* and *Justicia gendarussa* are put in water, this water is called 'Holy Water'.

Four close relatives of the dead carry the body by a *Bathi* (the projecting bamboo polls that rest on the shoulders of the poll bearers are called *Bathu* or *Bathi*).

7.10.3.2. Disposal of the dead

It is the customary of the *Mech* society to bury the dead bodies. Lately, some of the *Mech* have started burning their dead relatives.

7.10.3.3. Cremation

A pyre (*Khogan-oat*) is made with wood, mainly *Shorea robusta*. A *Oja* (priest) utters mantras (incantation) and one of the sons, takes a burning torch (*Banzar*) made of dry bamboos or of fibre free *Corchorus capsularis* stems and moves round the pyre three times (*Wat-shauno*) touching the mouth of the dead with the fire of the (*Khogan-shauno*) each time and then the pyre is lit (*Banzar-shauno*) from below. After burning is finished the ashes are cleaned and the place is

washed with water (*Gothai-dugarna*) and a small mound is made with soil where the body was burnt.

7.10.3.4. Burial

A grave is dug matching the length of the deceased. Some straws form the bed on which the dead body is laid. The body is covered with a white sheet and then slowly put into the grave with head directed to the south. After this the body is slowly covered with soil.

After the cremation or burial, the team comes back home and take a purifying bath. After taking bath, they are chewed leaves of *Imperata cylindrica* (*Thurmus*), *Ocimum tenuiflorum* (*Tulutsi*) etc. and touch fire and iron.

7.10.3.5. Unclean Period (Mourning Period)

Unclean period lasts for 7 – 11 days according to the custom of the particular family. In this period, the son offers food to the deceased before taking his own meals. A small mound is made with soil at the southern corner of the yard of the house of the dead. Everyday, before taking the meals, a part of the food is placed on the mound and also a pot of drinking water for the departed person to eat and drink. The *Mech* believe that the deceased can eat and drink like the living.

7.10.3.6. Sradh (Last Rights Ceremony)

On the day of the *Sradh*, the relatives are called. Some food is offered to the deceased on that day. A large bamboo basket with some cooked food and rice beer is placed in a clean plot. Another small bamboo basket is used for the purpose of the dead's seat. The son goes to the living room of the dead with that small basket, calls him or her and says, "today, we have here for you, you take the seat and let us go to the cremation or burial ground. There, we will offer you all drinks and foods." After saying that, five or more invitees and the sons of the deceased go to the cremation or burial ground. After reaching the spot, the relatives put foods at the place where the body was burnt or on the grave and call the dead by his or her name. Saying so all come back from the cremation or burial ground and a *Mech* barber shaves the head of the son. Then all relatives and others are taken a purifying bath and chewed leaves of *Imperata cylindrica*, *Ocimum tenuiflorum* or *Cynodon dactylon*, sun dried rice etc. and touched fire and a piece of iron. Thus, with this the unclean or the mourning period is over. Then the invitees then enjoy the funeral feast.

7.10.3.7. Botanical Notes

Not much plants are used during different events related to last phase of a person in the *Mech* society. The plants recorded are listed below:

- i. *Bambusa tulda* Roxburgh [Poaceae]: culms
- ii. *Corchorus capsularis* Linnaeus [Tiliaceae]: fiber free xylem sticks
- iii. *Cynodon dactylon* (Linnaeus) Persoon [Poaceae]: twigs
- iv. *Imperata cylindrica* (Linnaeus) Raeuschel [Poaceae]: leaves
- v. *Justicia gendarussa* Linnaeus f. [Acanthaceae]: leaves (Plate XIV, Fig. H)
- vi. *Ocimum tenuiflorum* Linnaeus [Lamiaceae]: leaves
- vii. *Oryza sativa* Linnaeus [Poaceae]: straw, grains
- viii. *Shorea robusta* Roxburgh ex Gaertner f. [Dipterocarpaceae]: wood

Apart from these they use some locally available flowers for showing respect to the deceased. Of the recorded plants uses of *Bambusa tulda*, *Corchorus capsularis* and *Shorea robusta* are used for burning the dead-body. Straw of *Oryza sativa* is used for making the bed in grave. So, the uses of these four plants are related to the final delivery of the body. However, the bamboo culms are also used for carrying the body.

On the other hand, twigs of *Cynodon dactylon* and the leaves of *Justicia gendarussa*, *Ocimum tenuiflorum* and *Imperata cylindrica* are used as religious purifiers. The food the offer to the deceased is mainly the boiled rice.

7.10.4. Discussion

When summing up, we find Mech people use all together at least 14 species of plants religiously in three most important phases of their life, namely Birth, Marriage and Death. These plants and their useful parts in different occasions have been presented in Table 7.10.1.

Table 7.10.1. Plants and plant-parts used by *Meches* during Birth, Marriage and Death

Plants	Family	Birth	Marriage	Death
<i>Areca catechu</i> Linnaeus	Areaceae	Stones from the fruits	Stones from the fruits	—
<i>Bambusa nutans</i> Wallich ex Munro	Poaceae	Culms	Culms	Culms
<i>Bambusa tulda</i> Roxburgh	Poaceae	Culms	Culms	—
<i>Bombax ceiba</i> Linnaeus	Bombacaceae	Floss	—	—

<i>Corchorus capsularis</i> Linnaeus	Tiliaceae	—	—	
<i>Cynodon dactylon</i> (Linnaeus) Persoon	Poaceae	Twigs	Twigs	Twigs
<i>Euphorbia royleana</i> Boissier	Euphorbiaceae	Grown plant	Grown plant	—
<i>Imperata cylindrica</i> (Linnaeus) Rauschel	Poaceae	—	—	Leaves
<i>Justicia gendarussa</i> Linnaeus f.	Euphorbiaceae	—	—	Leaves
<i>Musa balbisiana</i> Colla	Musaceae	Leaves	Leaves	—
<i>Ocimum tenuiflorum</i> Linnaeus	Lamiaceae	Leaves	—	Leaves
<i>Oryza sativa</i> Linnaeus	Poaceae	Grains	Grains	Straw, grains
<i>Piper betle</i> Linnaeus	Piperaceae	Leaves	Leaves	—
<i>Shorea robusta</i> Roxburgh ex Gaertner f.	Dipterocarpaceae	—	—	Wood

This implies that Birth, Marriage and Death are given much importance in the *Mech* society. And, that is the reason why they are using only the important plants to make these events safe and for a better future.

PLATE XIV



Figs. A. Birth related ritual, B. *Ocimum tenuiflorum*, C. Marriage site, D. *Sailon* (Bamboo-made tray), E. Bride & groom with priest, F. *Bambusa nutans*, G. Dead body covered with white cloth and flowers, H. *Justicia gendarussa*

7.11. Recorded Plants for Festivals & Worship

7.11.1. INTRODUCTION

Festivals are the integral events of social life. In traditional societies festivals are generally associated with some religious occasions. After oxygen and water, food is the most important material for survival. For the *Meches* in Duars and Kokrajhar there are no dearth of good air and fresh water as there are very wide forest cover and innumerable rivers and streams passing through the region after originating from different corners of the great Himalayas. So, food is the material without which man can't survive but food will not come to you plate of its own. Either it is to be collected from the vegetation or you need to grow it in your plots for cultivation. If the cultivation is proper that will produce good amount of better quality of food otherwise the farmer need no to be dissatisfied! So, it is expected that one or more important festivals of the society should be associated with the cultivation and/or harvesting of crops.

The *Mech* word *Phunai* is referred to *Devine Worship*. It is equivalent to *Puja* in Sanskrit derived languages (Bengali, Assamese, Oriya, Hindi, etc.).

A number of festivals are observed or organized by *Meches* in different times of the year. The ethnobotany of such festivals is discussed below.

7.11.2. MECH FESTIVALS

Different important *Mech* festivals include *Bathou Phunai*, *Kherai Phunai*, *Gagja Phunai*, *Baishagu*, *Lakhee Phunai*, *Hagra Madai*, *Gami Madai Phunai*, *Manasha Phunai*, *Maigaijennaini Sibinai*, *Mai jatraijennaini Sibinai*, and *Bakhrwi Sibinai*. These festivals or worships and the ethnobotany involved in those are discussed below.

7.11.2.1. *Kherai Phunai*:

The *Kherai Phunai* is regarded as a national festival of the *Meches*. It is a symbol of hope and desires which ancestors. The *Mech* kings also were believed to have been depending on the '*Kherai Phunai*' for their success in battle.

Kherai Phunai is believed to be the greatest religious festival of the *Meches*. They perform this puja on some specific occasions. The *Kherai* is of four kinds, (i) the *Darsan Kherai*, (ii) the *Umrao Kherai*, (iii) the *Phalo Kherai* and (iv) the *Nowaoni Kherai* (Domestic *Kherai*).

(i) Preparation of the *Kherai Phunai*:

The *Meches* have no temple or a fixed shrine of worship. They select any suitable place when they have to worship their gods and goddesses. An altar is prepared by the intending worshippers. The altar is long one and divided into three parts. It started from the south and ends in the northern end. Generally the grazing field is selected for making an altar for the *Kherai* puja. In the first of the altar a piece of cloth is hung up above the ground, it indicates the formless (Nirakar) existence of the *Obanlaoree* (the God). In the middle part of the *Bathou* is symbolized by the planted *Sijou* (*Euphorbia royleana* Boissier). The *Sijou* is surrounded by a round fence of the small bamboo (*Bambusa nutans* Wallich ex Munro) strips folded with five fastenings symbolizing the religious and spiritual principles grouped in five. Under the *Euphorbia royleana* and *Alari batti* (a sacred earthen lamp) is lighted. Five pairs nuts of *Areca catechu* Linnaeus (*Goy*) and leaves of *Piper betle* Linnaeus (*Phatai*), green fruits of *Musa balbisiana* Colla (*Athia Thalith*) and other sacred things are put on the plantain leaflets (*Musa balbisiana*) placed under the *Euphorbia royleana*. A pot filled with pure water is also installed there and top branches of *Jatrashi* (*Justicia gendarussa* Linnaeus f.) and *Tulutsi* (*Ocimum tenuiflorum* Linnaeus) are kept in the pot for sprinkling the holy water from within the pot on the altar. As a symbol of creation an egg and as a symbol of truth a piece of stone is kept in front of the *Bathou*. From the middle part of the altar to the northern section some rows of *Khangkhla* [*Phragmites karka* (Retzius) Trinius ex Steudel] are planted leading to the northern end where *Mainao*, the goddess of wealth or of crops is installed. The northern part of the altar symbolizes the beautiful and prosperous 'Mother Earth'. Two holy persons, a *Dauri* and *Doudini*, remain as the holy custodians of puja under the guidance of the *Oja* (a medicine man) and they perform all the religious rites. The surroundings of the entire altar are kept pure by burning aromatic articles like 'dhub stick', 'dhuna' and 'chandan'. The puja continues for three days and nights. In earlier days the puja lasted for seven days and nights.

(ii) Significance of the Altar for *Kherai Phunai*:

The whole length wise altar of the *Kherai* puja, has its significance, it is believed that the altar symbolizes a holy road from the Heaven down to the earth, or from the earth to the heaven, the

ideal of the philosophy indicates a holy link between the god of the heaven and the human beings of the earth.

A piece of cotton yarn which is tied on the post of bamboo with green leaves (*Bambusa nutans*) is believed to signify the unending principle or the law of creation of the creator. Thus the whole preparation of the altar of the *Kherai* puja bears significance.

(iii) Essential Materials for the *Phunai*:

In order to perform *Kherai* puja some essential material must be collected by the villagers. The materials are, -

1. *Euphorbia royleana* Boissier (*Sijou*): one whole plant
2. *Ocimum tenuiflorum* Linnaeus (*Tulutsi*): one whole plant
3. *Bambusa nutans* Wallich ex Munro (*Ooa*): three entire bamboos
4. *Bambusa tulda* Roxburgh (*Ooa*): four entire bamboos
5. *Oryza sativa* Linnaeus (*Mairong*): husked grain and grain-dust
6. *Phragmites karka* (Retzius) Trinius ex Steudel (*Khangkhla*): eighteen pairs
7. *Clerodendrum viscosum* Ventenat (*Lakhna*): eighteen pairs of leaves
8. *Cynodon dactylon* (Linnaeus) Persoon (*Duba Gang-se*): 9 leafy twigs
9. *Musa balbisiana* Colla (*Athia Thalith*): one plantain leaves and banana fruits
10. *Areca catechu* Linnaeus (*Goy*): five pairs of nuts
11. *Piper betle* Linnaeus (*Phatai*): five pairs of leaves
12. *Calamus erectus* Roxburgh (*Raidong*): one stick
13. *Gmelina arborea* Roxburgh (*Gambri*): a low stool made of its timber
14. *Dillenia indica* Linnaeus: included in the oath
15. *Jou* (Rice Beer) [many plants are used in its preparation]
16. Mustard oil
17. *Gossypium arboreum* Linnaeus (*Kshun Phang*): floss
18. *Guphur aowa khundung* (white rayon)
19. *Dhuna* (resin of *Shorea robusta* Roxburgh ex Gaertner f.)
20. Incense sticks (aromatic stick)
21. *Sindur* (vermilion).
22. A gold ring
23. A pair of of *Lotha* (a small vessel made of brass)
24. *Jewari* (earthen lamps), etc.

(iv) Essential Musical Instruments for the *Kherai Phunai*:

The following musical instruments are also essential during the '*Kherai*' –

1. *Kham* (drum) – one pair,
2. *Jotha* (cymbal) – one pair,
3. *Siphung* (a long flute of bamboo) – one pair,
4. *Thungri* (sword) – one or one pair and
5. *Dahal* or *dhal* (shield) – one or one pair.

(v) Sacrifice during *Kherai Phunai*:

The *Mech* worshippers sacrifice birds and animals in the name of Gods and Goddesses during the *Kherai*. Cocks, the goats and the pigs are generally selected for sacrifices to the God-in-chief, '*Bura Bathou*' and other God and Goddesses during the *Kherai Phunai*. Along with the sacrifice the worshippers also offer *Jou* (Rice Beer) to the Gods and Goddesses. The worshippers believe that the God-in-chief *Bura Bathou* and the other remain satisfied while they are offered *Jou* (Rice Beer) during the puja. Pigeons are also essential to be sacrificed during the *Kherai*.

It is observed that the Chief god of the *Meches* '*Bura Bathou*' is identified as the Aryan God '*Siva*', '*Mahadeva*'.

(vi) Role of the *Oja* or the Medicine Man during the *Kherai Phunai*:

The role of *Oja* is of great importance during the *Kherai*. Like *Doudini* he plays a great role during the *Kherai Phunai*. He instructs the worshippers and other co-workers of the puja like *Doudini* or *Githal* to help *Doudini* in performing the *Kherai* smoothly. The villagers are obliged to follow his advices when they arrange a *Kherai* or 'formulas' in such a way that the gods and goddesses become pleased easily.

(vii) The Prayer or the Oath: (in *Mech*):

"*Oi phiguri, Anangachay binangochy, nong ondo nongni ogian Boro phichaphorkhou ondo nongo; Oi chorzigiri nongo; nongno phothango, nongna loy zahoyo, nongnikhuroi dersin laocin roabo goilia; Oi, thaigirnikhonga khongba, sijauni sira siriba, siphungni gudunga dungba, bathouni bandoa bandoba, boro boraini rawa phongba; Bima phipha guru binikhaino Bathou pathinanoi Sijau gainanoi, gaca gainanoi, kham, zotha, Siphung lananoi nong piphakhou onchayo, ondo apha piphaguru ondo; ondor chingao gogloichonanoi thanai Boro phichaphorkhou ondo nong, oi piphaguru, khomsiniphray bokhonanoi chrangao langdo zongkhu, chorgoniphray bor charcrinanoi hordo nongo zong phichaphorno.*

English rendering of the above formula is likely as follows: “O God, our father, protect your ignorant children, you are the Creator, preserver and destroyer, all in one you are peerless; that the ‘ou fruit (*Dillenia indica* Linnaeus) has five rive rinds, the *Sijou* (*Euphorbia royleana*) has five ridges, the *Siphung* (a long bamboo flute) has five holes, the *Bathou* has five knots (of bamboo strips) and the *Boro Borai* (the elder persons) have five moral preachings; we plant the *Sijou* on the altar and light the flame of oil and worship you, whilst drums, flutes and cymbals play; oh father be merciful, have mercy on your *Mech* sons, steeped in darkness of ignorance, light us father, from darkness, lift us to light, from Heaven father, shower on us.”

During the *Kherai*, the *Oja* offers prayer to the gods and goddesses through *Doudini*.

At the time of enchanting the formula the *Oja* is found at half-sitting position without using any tool or mate, while the *Douris* also follow his position. This half-sitting position is called *Jaslang Jonai* in *Mech*.

7.11.2.2. *Garja Phunai*:

The *Garja Phunai* is another important ceremony of the *Meches*. The real or proper meaning of the word *Garja* is not yet found clearly. Some like to give the meaning of the word *Garja* as ‘God’. But, the gods are called in *Mech Modai*. Again some define the meaning of the word as way of making ones free from danger. It may be probable that the *Garja* word itself bears the meaning of expulsion; (*Garja* or *garjani* or *garnai* means expulsion or discharging anything in *Mech*) and during the *Garja* puja some evil gods are expelled or discharged from the area of a village. This system of *Garja* puja, where the evil gods are expelled is called *Bhasani* or *Bhasainai* (floating away in the river or a stream). The *Mech* word *Bhasani* means to float away in the river or stream. It is also to be noted that all the gods and goddesses are not expelled from a certain village or area by performing the *Garja Phunai*.

The *Meches* perform the *Garja Phunai* to purify themselves and the village after any seasonal festival. They believe that at the annual festivals the participants of the village become impure to free mixing with each other, merry-making, walking, drinking rice-beer from one’s house to another’s house. So, in order to purify themselves they perform the *Garja* puja at the village.

If some epidemic appears in a family or in the village then the villagers perform the *Garja* puja to protect themselves from the evils.

The *Mech* villagers use to examine the village whether it is all right or not. There is a procedure to examine the village as well as the villagers. The procedure is very easy. One night ahead of the proposed *Garja* puja in the evening the altar of the *Garja* puja is made clean after washing it with holy water. A piece of the *Musa balbisiana* Colla is placed on the altar and a pair of *Tulutsi* leaves (*Ocimum tenuiflorum* Linnaeus), nine grains of rice (*Oryza sativa* Linnaeus) are placed together on the plantain leaf and then covered the articles with a bamboo (*Bambusa nutans* Wallich ex Munro) basket. Next day, early in the morning the articles are examined. If the articles are found all right, it is believed that the village or the villagers are all right and free from danger. But, if the articles are found scattered or some of them are missing, then it is believed that the village and the villagers are not all right. The villagers suspect some persons to be involved in some illegal or immoral activities. The guilty persons are compelled to apologize before the gods of the '*Garja Phunai*'.

The *Meches* believe that the flood also carries diseases from one place to another. So, in order to keep the village free from diseases they perform '*Garja Phunai*' and let the diseases or the evils floating away from the village.

(i) Preparation of the *Garja Phunai*:

a. *Salami*: The pre-*Garja* arrangement is called *Salami*. It is performed one day ahead of the *Garja* puja. The *Douri* of the *Garja* puja cuts a chicken and offers it to the *Bura Bathou*, and then he purifies every house of the village sprinkling holy water, which is kept ready in a pot or lotha (*Lota*). In the night the villagers have to remain pure and neat for the puja to be solemnized the next day.

b. *Garja Sali*: A lonely place of the grazing field, which is covered with jungle, is selected for the *Garja* puja and the place of the puja is called *Garja Sali*. They regard the bank of the river as the most suitable place for the *Garja* puja.

They clean the plot where the altar of the puja is to be made. A few small huts, which are called *Dera* in *Mech*, are built by the villagers. Rice beer prepared by the villagers is kept in the camp house of the puja. Some grains of rice, a pair of new *Dokhna* (a garment for the female *Meches*) and ornaments are kept inside the temporary camp at night. It is peculiar that nobody dares to enter into the camp and steal the materials offered to the gods and goddesses. The camp house is kept unguarded for the night. This is called *Salami*. The next day morning the villagers clean their houses all the utensils, cloths, etc and get ready for the puja. A pair of Areca nuts

(*Areca catechu* Linnaeus) and a pair of Betel leaves (*Piper betle* Linnaeus) on a small plantain leaf are placed inside the small hut.

(ii) Offerings and sacrifices to the gods during the *Garja Phunai*:

For the puja, a cock, a hen and a chick are sacrificed. Three pigeons are set free in the air. Besides sacrifices, for god, a pair of areca nuts and betel leaves, and a pair of banana fruits are essential.

(iii) Materials required for *Garja Phunai*:

1. *Areca catechu* Linnaeus: nuts
2. *Musa balbisiana* Colla: leaves & fruits
3. *Ocimum tenuiflorum* Linnaeus: leaves
4. *Bambusa nutans* Wallich ex Munro: culms
5. *Oryza sativa* Linnaeus: grains & straw
6. *Piper betle* Linnaeus: leaves
7. *Lotha*: an utensil
8. *Dokhna*: one type of Mech traditional dress for females
9. Ornaments

7.11.2.3. *Baishagu*:

The festival of *Baishagu* is generally celebrated by *Meches* during mid-April. It is in fact the most cherished festival of the *Mech* tribe. The *Mech* tribe celebrates this festival in the season of spring at the advent of the New Year. This festival is devoted to Lord Shiva or *Bathou* as he is worshipped during this festival with utmost devotion and offerings of chicken and rice beer are made. During this festival they sing and dance surrounding *Bathou* (the *Euphorbia royleana* plant).

The only plant product used is *Jou* – the rice beer. In addition, *Euphorbia royleana* is the only other plant involved in this festival.

7.11.2.4. *Laakhee Phunai* (The *Lakhee* Worship)

(i) Source of the Title: The *Meches* called the things '*Lakhee*' which are much beneficial to them. Paddy crop is very important as rice is their staple food. They specially grow '*Amon*' cultivars of paddy belonging to *indica* variety of *Oryza sativa*. They arrange '*Lakhee Puja*' at the

time of crop ripening and harvesting. One or more than one families is normally arranged this *Phunai* or puja.

(ii) Period: The *Amon* paddy is harvested during *Agrahayana* (November – December) or *Pous* (December – January) by the *Meches*. So the *Lakhee* Puja is performed during these months every year.

(iii) Motive: The *Meches* think that it is necessary to get the permission for harvesting paddy from '*Mainao Burui*' – the goddess of the paddy-crops. The pious *Meches* belief that without Her permission, collecting *Amon* crop is a sin.

(iv) God and Goddess: The Goddess '*Mainao Burui*' who is the wife of God '*Bathou Brai*' is the main adoring figure in this puja. The other associated god and goddess, who are also worshipped along with '*Mainao Burui*' are *Hailong* or *Maither Brai*, *Basmussi*, *Dibaulee*, *Sanjanbralee*, *Khaila*, *Aablakhungoor*, *Chang Brai*, *Chang Burui* etc. But these names vary in different regions.

(v) Ingredients of Worship: Banana (*Musa balbisiana*), incense (dhup), earthen lamps, mustard oil, handmade-thread, flowers, betel leaf (*Piper betle*), betel nut (*Areca catechu*), plantain leaf, *Tulutsi* leaves (*Ocimum tenuiflorum*) etc. And, for the immolation (if practiced) generally pigeon, hen, duck etc. are used.

(vi) Procedure: The location for this puja is chosen normally outside of the house. The place can be a field or the open yard. First the selected spot is cleaned. A small hut is built at the spot to the north-east. It is called '*Dera*'. On the day of worship the bundle of ripens *Amon* paddy is planted alongwith roots on the altar in the hut. Another altar is built to the north-south corner of the '*Dera*'. Here the *Meches* offer their prayer to the associated god and goddess. The *Dera* and the altars are decorated with colorful flowers.

Inside the *Dera* they worship only to '*Mainao Burui*' and to the others at the altar located outside.

They place the offerings to the deities like *Bathou Brai*, *Chang Brai*, *Chang Burui*, *Basmussi*, *Dibaulee*, *Khaila*, *Sanjanbralee*, *Aablakhungur* and *Hailong Brai* respectively starting from the north. The priest of the *Meches* helps to arrange the offering. '*Panthol*' the assistant of

the priest also helps him in arrangement. After placing the offering to the deity, the priest sits on knees and heels toward the east. Then he scatters the droplets of water by *Tulutsi (Ocimum tenuiflorum)* leaf on him and others for self-purification.

Now the priest sits in front of the altar of '*Mainou Burui*' and starts incantation, the eulogy of the goddess. Then he appeals for permitting the devotees to harvest the crop. Thus the eulogies or praises the '*Bathou Brai*' and other associate god-goddess. Next to the incantation he cuts the crop-stalks that were planted on the altar. In the *Baroari* worship (when a number of families involve in the worship) the respected elder village-woman who specially wears new '*Dokhna*', the traditional dress of *Meches* ladies, and cuts the crop-stalk with a new sickle. Then the priest arranges the ingredients of the puja in a new winnowing-platter made of bamboo (*Bambusa sp.*). In the case of *Baroari* puja the elder lady dressed with '*Dokhna*' way of her home. The priest again scatters the droplets of water by the *Tulutsi (Ocimum tenuiflorum)* leaf on the way to make the path sacred. The lady follows the priest dancing to the music. Then both the lady and the priest enter into the '*No-ma-no*'. Here the priest ties the cutting stalks of crop and hangs them from the fence or on the wall. The priest carries on incantation while sets the crop-stalks up on the wall. This time he recites the eulogy of setting the crop-stalks. The puja is over after setting of the crop-stalks.

(vii) The Eulogy of the Adoration (Incantation):

Om, hrim, khlim phodosa

Oh the kind mother '*Mainao*',

Please do favour to hear me

Hear me please.

Today in this sacred moment

We all the innocent children of You

We recall You,

We offer our pranam (respect) to You.

It is known by You, that the time of harvesting the new crops has come now.

Our ripen crops are in the field,

The birds, insects, and the pest are spoiling them,

So our kind mother, we offer our respect to get the permission for reaping.

Today in this holy moment we have offered fruits, flowers and earthen lamp at

Your altar

Our great, kind mother, accept these all, please!

Please forgive all our mistakes and favour us.

The Music (Songs):

How nice is today!

How nice! how beautiful!

In the joy of the New Year and the joy for harvesting

We can't stay inside the room

Our great mother 'Mainao' we recall you and become over ----- today.

How kind You, our mother!

Your blessing saves us

We all are alive due to You

For You, to You.

7.11.2.5. Bathou Religion and the Nature of Worship:

Bathou religion is one of the oldest religions of world. It is propagated and worshipped largely by *Meches* from the ancient age prior to spread of Aryan settlement in India. Only after Aryan's influences few *Meches* were converted to different sects of Hindu religion and after the annexation of earlier Assam by East India Company some *Meches* were converted to Christianity. *Meches* could have had its distinct language, culture, customs and traditions built on *Bathou* religion.

Bathou religion is based on one God, *Bwrai Bathou*, who is almighty Supreme Being and creator.

About creation *Bathou* religion preaches that *Bwrai Bathou* created five matters – earth, water, air, heat (Sun) and universe (*Ha, Dwi, Bar* or *Arw okhrang*). Who has created these matters, he has also created all living beings and plants including men through evolutionary process! Hence he is the creator (*Swrjigiri*) and *Meches* obey and worship *Bwrai Bathou* for the well being of all creatures. There are no other myths in *Bathou* religion. The main hymn of *Bathou* religion is:

Sijou siri siriba

Chifung gudunga gudumba

Taigir sing bwiraini

Raoa fongba

Subungni asara asarba

Bathouni bandwba.

The basic concept of *Bathou* religion is expressed through this verse. The meaning of this verse is deep and wide ranging whereby believers in *Bathou* religion are instructed to abide by the spirit of this verse to make life worthwhile.

Five ribs of *Euphorbia royleana* (*Sijou*) represent the virtues of earth, water, air, heat and universe, which are inevitable for the existence of plants and creatures.

The holes of flute used by *Meches* are of five, which represent nose, ear, mouth, urinary hole and anus. All these are basic organs of human or other animals and require care to enjoy a healthy life.

Mwning sing's five words are *Awng*, *hring*, *khling fwd*, *se* which imply earth, water, air, heat and universe without which plants and living being cannot live.

So, also *Asharba* and *Bandwba* indicate rites observed at the time of conceive, birth, marriage, old age and death. *Ashar* and *bandwba* imply duties and responsibilities attached to every cycle of period of life to make life meaningful.

The method of worshipping of *Bathou* religion is simple. An altar (*Bathou*) is constructed by 18 pairs of bamboo (*Khami*). The *Euphorbia royleana* (*Sijou*) is planted in the middle (Plate XV, Fig. A). *Ocimum tenuiflorum* (*Tulutsi*) and *Justicia gendarussa* (*Jatrashi*) are also planted near by *Sijou*. These are taken as the symbol of peace and prosperity and protection from all evils. *Sijou* is the symbol that implies supreme soul, *Bwrai Bathou*. In the time of worship pure water (*Dwi Shanthi*) is sprinkled at the altar with *Duba-gangse* (*Cynodon dactylon*) and *Tulutsi* (*Ocimum tenuiflorum*) and a pair of betel nuts (*Areca catechu*) and leaves (*Piper betle*) are offered on the plantain (*Musa balbisiana*) leaves. An *alari* (lamp) is lighted to pray before *Bwrai Bathou*.

Bwrai Bathou religion attaches special importance to purity or sacredness in personal as well as social life. Nurturing of purity of thought, non-envy and co-operation are the essence of *Bathou* religion. And exceptionally dirt of impurity could not have access to *Mech* society to create chaos. They had peaceful social life under the tenet of *Bathou* religion and its preaching. They were co-operative among each other and maintained the sanctity of purity or cleanness of life strictly, so that chaos and disturbances do not mar (damage) social well being. The practice of high and low caste prejudices and untouchability never get a place in *Bathou* religion.

7.11.2.6. *Hagra Madai*:

Before entering the forest for the collection of fuel wood or cutting timber, *Meches* perform '*Hagra Madai Phunai*'. It is held in the Bengali month *Pous* (December – January). It is the worship of the Goddess of the forest and essentially the worship of the Tree God. A spot in front of a big tree of *Premna bengalensis* (*Babol*) smeared with fresh cow-dung emulsion and dried clean. Flowers, Banana, Sundried rice, a hen are offered and burning of incense. (Plate XV, Fig. B).

7.11.2.7. *Gami Madai-Phunai* (Worship of Village God):

In the month of *Baisak* (April – May) the *Mech* people perform '*Gami Phunai*'. Here they worship all gods at a time, e.g. *Bathou*; *Mainou*; other several gods e.g. *Arang*, *Khoila*, *Manashu*, *Sanjan*, *Brali*, *Bagha* and *Baghi* (Plate XV, Fig. C); all river gods and goddesses. The idols of deities are made with bamboo sticks (*Bambusa nutans* Wallich *ex* Munro) and different colored flags are tied to the top of each stick (Plate XV, Fig. D). A lump of earth called '*Thansali*' representing the Mother earth, is also worshipped. This '*Thansali*' is a combination of *Mahakal*, *Mainou*, *Kali*, *Tista-Buri* and *Bisahari*. A *Oja* performs the *Phunai* invoking the well-being of all villagers.

Piper betle Linnaeus (*Phatai*), *Areca catechu* Linnaeus (*Goy*), rice beer (*Jou*), ripe fruits of *Musa balbisiana* Colla (*Athia Thalith*) and de-husked grains of *Oryza sativa* Linnaeus (*Alua Mairong*) are offered and incense sticks are burnt. Leaves of *Ocimum tenuiflorum* Linnaeus (*Tulutsi*) and twigs of *Cynodon dactylon* (Linnaeus) Persoon (*Duba-ganse*) are used. Hens, cocks, pigeons and ducks are sacrificed as offerings (Plate XV, Fig. E). The birds are killed by one stroke. Blood and heads of the birds are given to the gods and goddesses (Plate XV, Fig. F). Rice beer and blood are given in a bowl made of plantain-leaf. A bit of liver is cooked with rice, pseudostem of *Musa balbisiana* and offered to the gods and goddesses (Plate XV, Fig. G). After that, two persons go outside the village with offerings and rice beer suspended on a rod made from the branch of *Gliricidia sepium* (Jacquin) Walpers (*Benda Bimfang*) (Plate XV, Fig. H) and kept that on a place. The village people believe that these offerings are for the evil Gods.

7.11.2.8. *Manasha Phunai*:

In the month of *Asar* (June – July) '*Manasha Phunai*' is held. *Manasha* is the goddess of snakes. Two ripe fruits of *Musa balbisiana* Colla (*Athia Thalith*), milk and beautiful flowers are offered to the god and incense sticks are burnt. All offerings are placed on a plantain leaf. The offerings are taken on hand by the Grand Lady of the house (*Grazoh*) and also the other members of the

family, made a procession. They go to the river and the offerings are immersed in water (Plate XVI, Fig. A & B).

7.11.2.9. Maigajennaini Sibinai (Paddy Sowing):

At the beginning of the paddy sowing, on the first day the Grand Lady (*Grazoh*) of the family, takes a bath in the morning, put on clean cloth, and then go to the field. The land is ploughed and prepared for the sowing beforehand. A plantain tree (*Musa balbisiana* Colla) is planted over there and worshipped by offering the seeds of *Vigna mungo* (Linnaeus) Hepper (*Sabai gwchhwu*), flowers, two stones of *Areca catechu* Linnaeus (*Goy*), two leaves of *Piper betle* Linnaeus (*Phatai*), ripe fruits of *Musa balbisiana* Colla (*Athia Thalith*) and fruits of *Cucumis sativus* Linnaeus (*Gumbri*) (Plate XVI, Fig. C). After worshipping, the lady is sown seeds or plant seedlings for few lines facing east, to the rising sun and then followed by others. (Plate XVI, Fig. D – E).

7.11.2.10. Maijatraijennaini Sibinai (Harvesting):

On the first day of harvesting the Grand Lady (*Grazoh*) is takes a bath in the morning, put on clean cloth, go to the field, cut a few sheaves, put them on a bamboo plate, carried them home and hung them from the roof of the *Mainou*'s hut (Plate XVI, Fig. F). These will remain there as a sign of good fortune. After this, regular cutting of the crop is begun by others.

7.11.2.11. Bakh'rwi Sibinai (New Rice-eating):

At the beginning of the paddy husking, the Grand Lady (*Grazoh*) of the house, takes a bath in the morning, put on clean cloth and then go to the granary. She performs *Phunai* invoking comfort and welfare for all family members and offer ripe fruits of *Musa balbisiana* Colla (*Athia Thalith*), beautiful flowers and burn incense sticks. The lady takes permission from the *Mainou* to start the paddy husking process (Plate XVI, Fig. G & H). After that, regular husking process is begun and eating of newly harvested rice is started in that family.

7.11.3. ANALYSIS OF PHUNAI ETHNOBOTANY

A total of eleven festivals or *Phunai* (Devine Worship) have been observed and analysed. It has been observed that in all the eleven events one or more plants are involved.

It is found that in all the religious festivals the main intention of the *Mech* people is the social cleanliness and begging grace of the God for their prosperity. Through the *Kherai Phunai* they connect the God through their imaginary way, which may not be scientifically feasible, but

for this every family take up cleaning operations that is important for any society. Though there is every possibility to misuse of verdict of the Puja, but in religious mind generally such things do not occur.

During *Garja Phunai* also, main part of the festival is the cleaning operations. The house, the utensils, cloths, etc. – everything are to be cleaned. But, there is one strong point of misuse of this festival. If the *Salami* found disturbed next morning the *Mech* people decide that there are one or more uncleaned people in the village. But, through the *Phunai* activity there is no scientific methodology for detection of the uncleaned people.

However, for both the *Phunais* a number of plants are used. And, most of these plants are either edible or medicinal or of much economic or social importance. Plants like *Oryza sativa*, *Musa balbisiana*, *Areca catechu* and *Piper betle* provide edible products for survival. Again, the plants like *Euphorbia royleana*, *Ocimum tenuiflorum*, *Clerodendrum viscosum* and *Cynodon dactylon* are well known medicinal plants. Other plants [*Bambusa nutans*, *Bambusa tulda*, *Calamus erectus*, *Gmelina arborea*, *Gossypium herbaceum*, *Phragmites karka*, *Shorea robusta*] used in *Kherai Puja*. In addition in the prayer for the Puja the mention of *Dillenia indica* fruit appears to be quite important. This is also one edible fruit.

Similarly in *Garja Puja* too a number of plants [*Musa balbisiana*, *Ocimum tenuiflorum*, *Oryza sativa*, *Bambusa nutans*, *Areca catechu* and *Piper betle*] are used. And, all these plants are economically very much important.

It can now be observed that in both the festivals *Mech* people do not use any plant that is otherwise not useful for them. *Mech* society does not observe much religious festivals. Apart from these two naming and marriage are two more occasions which might be referred as festivals. And, in all cases, plant or plant materials used by them are mostly useful ones for their society. This is the clear reflection of their intention to please the deity with something useful.

This is true for other festivals and *Phunais* too. But, further analysis also shows that the ethnobotany of all these festivals is not much broader. And, almost no other new plant added to the list of plants discussed above for the remaining *Phunais*.

PLATE XV



Figs. A. *Bwrai Bathou* (*Sijou*) *Euphorbia royleana*, B. *Hagra Madai* (*Premna bengalensis*), C. Idol of *Bagha & Baghi* (God & Goddess), D. Bamboo made idols worshipped during *Gami Madai-Phunai*, E. Bird sacrificed during *Gami Madai-Phunai*, F. Blood of bird offered to the God, G. Offering is cooked, H. Offerings for evil God

PLATE XVI



Figs. A. & B. Offerings for *Manasha* God, C. Before paddy sowing *Mech* women are busy with their *Maigaijennaini Sibinai* (Paddy sowing ritual), D. & E. After completion of ritual ceremonies starting their paddy sowing, F. *Mainou* (Main Goddess) hut, G. & H. *Bakhrwi Sibinai* (Occasion of getting new paddy from granary)

7.12. Plants Referred in Folklores

7.12.1. INTRODUCTION

Folklores are present almost in all societies. But with the advancement of social structure including its tremendous complexity most of such societies are loosing their folklore very fast. On the other hand traditional societies maintain folklores as their social and cultural treasures. The highly traditional *Mech* people maintain their folklores with much love and respect. Folklores can be found in many forms, like (i) Songs, (ii) Poems, (iii) Puzzles, (iv) Stories, (v) Dances and (vi) Dramas.

During the present survey a large number of folklores of different kinds were recorded. Folklores involving plants were selected and are presented in this section of the report.

Selected folklores are of two types (i) Poems and (ii) Puzzles and are presented below.

7.12.2. PLANTS IN *MECH* POEMS

Poems, songs and dances are the basic elements of cultural activities of any society. A number of poems were collected during the present survey in the *Mech* society. Some are descriptive, mainly of natural beauties. As for the following (Poem No. 1):

Poem No.1:

*“Daubo daubo
Gang rabo rabo
Gaungbou kani rath rath”*

[Oh crane, oh crane
White wings with open;
Let us with you to go
Take a pause, take a pause – be slow.]

Here the beauty of a flying crane with its spreading wings in the background of open blue sky has been described. The sky is endless and, the viewer is surprised to think how far the crane

will move!! He thought, if he can accompany the crane then he can also move away to far away places and can enjoy the beauty of the earth. If the crane stop once for him he will certainly accompany the crane.

This poem is not reflecting any of their traditional knowledge but, certainly, reflecting their way of thinking in a philosophical mind.

Though the ladies collect most of the edible plants and firewood from the forest, males generally take up the toiling job of cultivation. If the men in the family do not cultivate then they will not get enough crop for their survival. And, that has been reflected in the following sonnet (Poem No. 2):

Poem No. 2:

*“Ada bola mailam daung
Jaung maun jaudang ji-joy”*

[Brother Kala has harvested the crops
So we are being feed
How fine?]

The work distribution in *Mech* society is well defined. The duty of food preparation, i.e. cooking is done by the ladies. And, no doubt, elder ladies are better experts in the preparation of different tasty items. But, when all the required items are available for cooking then also it may not be possible for the lady to cook if the fire can not be put on in their traditional oven. Again, to put the oven on fire, firewood is to be put in the oven and that wood should be collected from the forest by the man in the family. On the other hand for procuring wood he needs an axe which is made by an iron-smith, how he will make the axe if there is no fire? So, fire is the basic source of energy without which the present day human society can not survive. The following poem (Poem No. 3) nicely depicted this interrelationship in a beautiful manner including the importance of tamed fire.

Poem No. 3.

*“Burai naung manau ankham chhongakhoi
Burai naung manau hagra chhinnal khoi
Ruthalou goiya
Ruthaloung manaung goiya
Kamalau angkhau banaya khoi
Kamar naung mauna banaya khoi*

Angar nau dhoya.”

[Why the old-lady does not cook rice?
Why you, not ‘the old-lady’ cook rice?
Why the old-lad does not cut wood?
Why you not ‘the old-lad’ cut some wood?
Why then the ironmonger does not make the axe?
Why you not ironmonger make that?
It is for having no fire.]

Ants and other insects quite often affect their crops. To save their crops from flies and ants regular monitoring and care of plants are required. Generally younger family members [who can not work with plough or spade] do this type of work. If they neglect their work then, certainly, crops will be damaged. This is a regular phenomenon and that has been reflected in the Poem no. 4.

Poem No. 4.

*“Jio jio bongbrama
Thamphoi dadranga
Gaumaung mani jalang baay
Geethang mani galang baay
Maukhra balanda
Suh suh suh
Aagoi jwaraiya undu.”*

[The ants suck the ripen beans
And are being sucked by the flies.
All the ripen beans are finished
Only the unripen are missed.
Hash! Hash-a, sha-a---
Sleep, sleep oh sweet brother,
and you little, my darling sister.]

Tharai (*Alpinia nigra* of Zingiberaceae) is one wild plant. The inner soft part of pseudostem is edible and its edible part is also sold in the market. In the habitat *Tharai* produce thick clumps. In a clump if new sucurs do not develop then how edible parts will be collected!

Old plants, at or after flowering, are not suitable for consumption. So, people needs new plants in clumps. This wish or desire has been expressed in the Poem no. 5.

Poem No. 5.

*“Tharai rhu rhu tharai ba
Tharai-ni – fisa jokhay ba.
Aaphaya thang daung hathayao
Gusla fen laynau
Aayiya-thang daung aabaunao
Maibra sithao layela
Sai, sai, sai –
Aagoi jwabo naung dagab sai.”*

[In the *Tharai*'s clump, five *Tharai* are there
Tharai has kids of five pair
Father has gone to the 'Haat'
He will sure bring dresses
Mother is in the grandpa's home
For the Borni-cake.
So, stop, stop, stop and why
My little sister you then cry?]

Mech villages are located in or on the margin of forests. They generally live in small cottages. Very recently they are using corrugated metal or asbestos sheets to thatch their houses but, earlier, some local species of plants including *Saccharum spontaneum* and *Imperata cylindrica* were used for this purpose. There was every possibility that such thatched roofs would develop leakage and water will enter in the house moistening their belongings. And, during the rain it becomes difficult to come of the houses as paths or roads were all muddy and weedy. But, during monsoon, it is expected that there will be enough rain to help their cultivation. So, when rains remain off, they try to enjoy such moments in an environment developed with well grown lush green vegetation sprinkled with flowers of different colors and shades. Those enjoyable moments has been picked up in the following poem (Poem no. 6):

Poem No. 6.

“Kaltang kultang jwi dau aang

Mai gai khangbla nang gol jhangkra
Jou laung naini bauthaur chofoibla
Gauja, gaumu, gauthang rathoigang baidi baidi
Aagar akhaio aang.
Aarou baidi baidi
Roung hananoi bibar erkhangnau aang
Tang khaultang jwi daou aang
Bauthaur chofoibla.”

I weave cloths tow-twang-toon
 When the rain is gone.
 When it will over- the sowing;
 Will drink haria, after the reeping.
 And red, green with the yellow –
 So many flowers and leaves I'll draw.
 I weave cloths tow-twang-toon
 When the rain is gone.

The 7th poem noted below express the happiness in a satisfied family or society. When their granaries are full, their pets are happy with abundant food and the climate is so shooting for leading the comfortable life. Like many other societies people in the *Mech* society to express their thanks and confidence on God. They arrange worshipping at the sit of mother *Mainou*.

Poem No. 7.

“Lamaio mauji thwabaio
Chhoima thwabaio
Aabau thwabaio manshi.
Dabri bariyao maushou gangsau jwao
Baurama gangsau jwao
Jwae aamaya mai gundoini aaphar
Gograsing bao thaou dao.
Hangshau pabaou
Ama – barma
Bakhri singaou thao baidi maigong faigong
No-ma – naomaou thao baidi baida

*Janai naungnai aarounwa khonaou
Haou mainou buroini ganti.”*

[On the path, there moves the cat
The dog moves and the men walk
The cows graze in the field
Also the goats and pigs eat
In the coops there are hens-ducks and goats;
And the granary is stored with rice and grains.
The greens are at the nook of the house
And kitchen is full with edible-goods,
Where mother *Mainou* sits, is our goddess.]

7.12.2.1. ANALYSIS OF PLANTS USED IN *MECH* POEMS

Like most of the traditional societies, the people in the *Mech* society also are culture loving. The selected seven poems presented here are mostly showing their relationship with their habitat, which is generally forested and full of useful materials to use as food, fodder, house building materials, medicines, making instruments for hunting and recreational activities.

Only the first poem is too much philosophical but the remaining six poems are expressing their relation with the surrounding environment and with frequent reference with different types of plants. The plants they refer are mainly useful for them. Their difficult life style, natural enemies, joy from successful cultivation, etc are all become background subjects of their poems.

7.12.3. PLANTS IN *MECH* PUZZLES

Recreation is a basic intuition of most of the animals (and plants). Man has developed innumerable methods of recreation and plants are used in majority of cases in some form or other. Tribal traditional modes of recreation include songs, dances, music, puzzles, games and sports. A large number of puzzles were collected covering different aspects. Here, some of the puzzles involving plants or plant materials are presented below:

Puzzle No. 1:

*Moukhou dailele
No-injur konayao
Ma jirath bilai?*

[*English*: What is there in the nook?]

Finlu (Answer): *Jou* (rice beer).

Puzzle No. 2:

Abo dadura mejem bhara

Ma jirath bilai?

[*English*: Who is that old fat man with rough skin?]

Finlu (Answer): *Lichu* (*Litchi chinensis* of Sapindaceae).

Puzzle No. 3:

Shibro-bro abo bigur

Singao hai dong bidoi bur

Ma jirath bilai?

[*English*: Who is the old man has juice inside and dry skin at out?]

Finlu (Answer): *Jambura* [*Citrus maxima* of Rutaceae].

Puzzle No. 4:

Bimaya gaom thayo fisaya

Uraee lango

Ma jirath bilai?

[*English*: Not lie it is true, son take a fly but mother stays at bellow.]

Finlu (Answer): *Zilith aaro shimmuri* (bow and arrow made of bamboo).

Puzzle No. 5:

Hwani chhayao bifang

Bifangni chhayao fithai

Fithaini chhayao bifang bilai

Ma jirath bilai?

[*English*: There is fruit in the tree and tree on the fruit above the soil, now you solve the riddle.]

Finlu (Answer): *Anarousa* [*Ananas comosus* of Bromeliaceae].

Puzzle No. 6:

Futhja mati chitlayaou

Daoukhi choulayaou

Ma jirath bilai?

[**English:** Name the keen that at the down, excreta is licked in the yard by it?]

Finlu (Answer): – *Hasib* (broom-sticks made of different plant parts).

Puzzle No. 7:

Megon gaiyee, ateng gaiyee, begong moun cheyaolou

Birath gidir deini meider badi moudoum

Ma jirath bilai?

[**English:** No eyes, no legs

Only stands on bones

Looks like hippopotamus; have you ever seen?]

Finlu (Answer): – *Mai jigwabni punji* (heap of straw of *Oryza sativa* of Poaceae).

Puzzle No. 8:

Gang gounang janji jeng greb kanai rung bang

Hwathay riji riji jido lari

Chour chikhoula moun

Ma jirath bilai?

[**English:** She has a thin waist and curly hair

With glittering teeth of sixteen pair

And the body is covered with feathers.

Who are the sweet daughters, guess!]

Finlu (Answer):– *Dubba* (*Zea mays* of Poaceae).

Puzzle No. 9:

Durung doung cheyaounou golee bungjachhe moushou

Ma jirath bilai?

[**English:** The shed is full of cattle which are tied by a rope in a row, - what is that do you know?]

Finlu (Answer): *Kalkou, Kombra* (bottle gourd, pumpkin; *Cucurbita maxima* of Cucurbitaceae).

Puzzle No. 10:

Fisakhou labra Bimaya biji shuhorou

Ma jirath bilai?

[**English:** Take the baby, the mother will give a strike heavy – what is it?]

Finlu (Answer): *Boi (Zizyphus mauritiana* of Rhamnaceae).

Puzzle No. 11:

Nu-naibla habar

Deiblanou aanoyou burblayou

Ma jirath bilai?

[**English:** It looks strange on, the king is unable to put its crown on – what is it?]

Finlu (Answer): – *Khoma Bilai (Dendrocide sinuata* of Urticaceae).

Puzzle No. 12:

Rajani topi

Rajaouni gannao haya

Ma jirath bilai?

[**English:** It is shame on, the King is unable to put its crown on – what is it?]

Finlu (Answer): *Chou Bilai* (head cover; *Phrynium pubinerve* of Marantaceae).

Puzzle No. 13:

Rada gaiyee bingfang

Ma jirath bilai?

[**English:** Name the plant that has no roots.]

Finlu (Answer): *Badamani* (mosses).

Puzzle No. 14:

Jaba janalei khinou rounga

Ma jirath bilai?

[**English:** Who can't evacuate after eat or swallow?]

Finlu (Answer): *Gandu* (pillow filled with floss from *Bombax ceiba* of Bombacaceae).

7.12.4. ANALYSIS OF PLANTS USED IN MECH PUZZLES

It is natural that while composing a puzzle the author will target a material that will be available in his/ her surrounding and are generally useful or interesting. Out of the 14 puzzles presented here at least six puzzles (Nos. 2, 3, 5, 8, 9 & 10) are indicating one species of edible plant for each. Those are *Litchi chinensis*, *Citrus maxima*, *Ananas comosus*, *Zea mays*, *Cucurbita maxima* and *Zizyphus mauritiana*. In addition, for the first puzzle the answer is *Jou*, for the preparation of

which quite a few plants are used and that is the elixir of their life. *Jou* is one important ingredient in their life style including religious festivals.

The answer for the Puzzle No.4 is 'bow & arrow'. *Mech* people live in forest villages where they need survive from the attack of many wild animals. In Duars, animals like leopard, bison, different types of wild cats, elephants, snakes, etc. quite often pose danger for them. At the same time for the collection of food male people enters the forests for hunting edible animals (especially when hunting was permitted). So, bow & arrow are very important weapon for them.

Answers for Puzzle Nos. 7, 12 and 14 are referring to very important materials. Paddy straw is now only used for thatching their cottages, it is also the most important stock fodder for their cattle. - - *Phrynium pubinerve* is very common in marshy habitat. Large broad and durable leaf-lamina of this plant is used for making temporary umbrella during rains, specially when while working paddy fields. - - And, for sleeping like any people they also need one pillow. *Bombax ceiba* is a very common plant in the area and the local people collect huge quantity of floss from these plants which is not only sufficient for stuffing their own pillows and mattresses, the excess amount is also having good demand in the market. So, it is natural that the pillow and/or simul-floss will take place in their cultural practices.

The 13th puzzle is framed on mosses. These are minute rootless plants but with hairy rhizoids. It is interesting that through their analytical observation they realized that mosses are rootless plants. This observation is scientifically true and highlights the strong analytical power of observation of *Mech* people.

At last, the Puzzle no. 11. For their survival *Mech* people, both males and females, need to move in the forest for long time. The strongly irritating indumentum of *Dendrocnide sinuata* gives them trouble quite frequently as this shrub is abundant in Duars forests. This is a powerful plant but will never be accepted as King as the plant is not acceptable as a lovable plant.

7.13. Recorded Plants in Traditional Cuisine

7.13.1. TRADITIONAL CUISINE

Every society has their own tradition in culture and taste. This also always reflects in the taste of their prepared food. This community-special taste develops certainly from the recipe that includes ingredients and mode of preparation or cooking. This is also true for the *Mech* community. During survey six *Mech*-specific preparations have been recorded from their kitchen. These six preparations are presented below including their ingredients and method of preparation.

I. *Inghur Khari*:

Ingredients: 12 – 15 leaves of *Momordica charantia*, 12 – 15 flowers of *Carica papaya*, 250 g broken rice grains, one chopped onion, turmeric powder, green chili and salt to taste.

Method:

Heat mustard oil in a deep vessel. Put onion, green chili. When they crackle, add broken rice grains and cook till they turn light brown. Add turmeric powder and salt and cook for few more minutes. Add the *Carica papaya* flowers and leaves of *Momordica charantia* and cook well. Add sufficient water and cook till the rice grains are soft. It tastes slightly bitter.

II. *Narzi*:

Ingredients: One cup dry leaf powder of *Corchorus capsularis*, 2 tablespoons *Khardoi Bedai*, one chopped onion and salt.

Method:

Boil ½ litre of water with chopped onion. Put leaf powder and salt. Let it cook till the gravy is thick. Pork or small fishes also can be added to *Narzi*. It forms a bitter but tasty gravy.

III. *Ondla*:

Ingredients: 200 g rice powder, 20 g chopped onion, 3 green chilies, turmeric powder and salt to taste.

Method:

Boil ½ litre of water in a vessel. Add chili and onion. When they turn soft, add rice dust, turmeric powder and salt and cook it. Add *Khardoi Bedai* and cook well. Chicken or pork can be added to it. It tastes like normal pulses preparation.

IV. Saonai:

Ingredients: Tender leaf-sheath of *Calamus erectus*, mustard oil, green chili and salt.

Method:

Leaf-sheaths are cut into pieces (about 8 cm long) and bound them together in a bundle and roasted and the peeled off the roasted bark of leaf-sheath. The soft parts are mashed. Mustard oil, green chili and salt are added to this and mix well.

V. Sobai:

Ingredients: 6 – 7 spadices of *Colocasia esculenta*, 2 chopped onions, green chili, mustard oil, turmeric powder and salt.

Method:

Cut spadices into small pieces and boil and then mashed in water. Then it is kept aside. Onion, green chili, turmeric powder and salt are cooked in heated mustard oil till they turn brown. Now add the boiled spadix along with water and cook for a few minutes. It tastes like pulses preparation.

VI. Maibra Sithao:

Ingredients: Powdered partially water-soaked rice grains and young leaf of *Musa balbisiana*

Method:

Leaven the rice powder. After that, cakes are made out of this, rolled in banana leaf and then steamed.

7.13.2. ANALYSIS OF PLANTS IN MECH KITCHENS

As most of the traditional societies in this area are now in regular touch with the modern society, they have mostly adopted Bengali-type food preparation. Even then, they maintained some of their traditional preparations. They collect most of the main ingredients from the local vegetation and other ingredients like onion, mustard oil, salt etc are collected from the local market.

Freshly collected young seedlings of *Corchorus capsularis* is generally used as a green vegetable. But, Mech people store its leaves in sun-dried condition and use the same round the year. Some plant parts like the flowers of *Carica papaya*, leaves of *Momordica charantia*, leaf-

sheaths of *Calamus erectus* and the spadices of *Colocasia esculenta* are not regular vegetables and are not generally used in modern kitchens. But these are all locally available in abundance and *Mech* people developed their own traditional recipe for using these vegetable materials.

The people in *Mech* community highly prefer their traditional food and they feel these foods are very tasty. In marriage ceremony *Ondla* is one very important cuisine. The nutrient value or quality of these *Mech* traditional foods is yet to be studied. However, some of these preparations can be popularize through little modification.