Evaluation of ethnobotanical knowledge in Komkar-Adi Biocultural Landscape of Eastern Himalayan Region of India

MOMANG TARAM1*, DIPANKAR BORAH1,2*, PURANJOY MIPUN3, VIJAY TARAM4,
ABHAYA PRASAD DAS5
1Department of Botany, Rajiv Gandhi University, Roing Hills, Doimukh 791112, Arunachal Pradesh, India
2Department of Botany, Goalpara College, Goalpara 783101, Assam, India
3Department of Botany, BN College, Dhubri 783323, Assam, India
4Forum for Siang Dialogue. Pasighat, East Siang District 791102, Arunachal Pradesh, India
5Department of Botany, BN College

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Abstract. Taram M, Borah D, Mipun P, Taram V, Das A.P. 2020. Evaluation of ethnobotanical knowledge in Komkar-Adi Biocultural Landscape of Eastern Himalayan Region of India. Biodiversitas 21: 70-87. The present study was aimed to document the traditional ethnobotanical knowledge in Komkar-Adi Biocultural Landscape of Upper Siang District in Arunachal Pradesh (Eastern Himalaya), India. Data was collected from three villages of Geku circle, Upper Siang District, between 2016-2019, covering more than 50% of the households using semi-structured questionnaires, personal interviews, focused group discussions, and transect walk with the core respondents. A total of 301 taxa falling in 203 genera and 85 families are recorded from the Komkar-Adi Biocultural Landscape (KABL), invariably used as food, medicine, and cultural material are directly and indirectly linked with livelihood security, community survival, protection, and preservation of the traditional culture and nature. Use value (UV) of all the reported species ranges between 0.017 and 0.051. 48 ethnomedicinal plant species were recorded, including herbs, shrubs, and trees, to cure 35 different ailments. Comparison of three other indices CI, RFC, and RI, indicating species ranking based on each index and the three fundamental values of the study, viz. FC, UR, and NU for each species were also calculated. Urtica dioica, Solanum spireale, Paris polyphylla, Curcuma longa, Clerodendrum colebrookeanum, and Begonia silletensis are essential for treating different ailments by the community.

Keywords: Conservation ethics, ethnobotany, Komkar-Adi, quantitative approach, traditional knowledge

INTRODUCTION

The Himalayas, also referred to as ‘the abode of snow,’ is the youngest and the tallest mountain ranges in the world, running over 2400 km from Afghanistan to India (Arunachal Pradesh-Myanmar border), covering Pakistan, India, Nepal, Bhutan, and Tibet Autonomous Region of China, providing shelter to diverse human cultures, floras, and faunas in its different parts (Das and Bera 2018). Due to a wide range of variations in altitude, aspect, and elements of overall climate, a widely diverse niche of vegetation is developed in its eastern part (E. Nepal to Arunachal Pradesh) and has become one of the essential biodiversity-rich areas in the world. These parts of the Indian Himalayas constitute many particular vegetation types depending upon the diverse combination of climatic and edaphic factors. The area covers the Northeastern states of India, namely, Arunachal Pradesh, Darjeeling part of West Bengal, and Sikkim. In terms of biodiversity, Arunachal Pradesh is the most diverse and most affluent in India, harboring about 50% of the country’s flora, of which 4% are endemics (Borah et al. 2019).

Arunachal Pradesh hosts as many as 26 major tribes and 110 sub-tribes (Taram et al., 2018). Of them, the Adi, resident of the Siang valley, is one of the numerically more significant tribes comprising 26.9% of the total tribal population of the state (Krithika et al., 2008). They have several sub-groups, living in different restricted small pockets of the Siang belt and are recognized as Aching, Bokar, Bori, Karko, Komkar, Miling, Mnyong, Simong, Padam, Pangli, and Pasi (Boko and Narsimhan 2015). These sub-groups share similarities in almost every aspect; the only difference is their dialect.

People of the Komkar sub-group reside in a small group of villages at Rasing, Sijer, and Buksang of Komkar-Adi Biocultural Landscape under the Geku Circle in upper Siang District of the state. The major festivals of the Komkar people are Solung, Aran (Unying), and Etor, which are similar to other sub-groups. ‘Etor’ is celebrated in May, related to community fencing of the village boundaries. A special war dance, ‘Taapu,’ is also performed, re-enacting the action of war, its glory details, and the triumphant cries of the warriors. The headgear worn for dancing is ‘leb-ro’ made of black fibers from the leaf-sheath of Arenga obtusifolia (Tasat), a white coma of Beaumontia grandiflora dried stem pith of Brassaiopsis glomerularis by the Komkar. Other sub-groups use different plant species for this purpose too. Hence, it is linked to the locally available species where a particular group lives long. However, apart from these, their customs remain the same, and all of them have inextricable links to the forest.
resources for their regular sustenance and to meet their day-to-day needs.

Most of the available ethnobotanical publications have recorded primarily qualitative information/data, and such data were not verified through statistical analysis. Recently, many workers have applied quantitative methods in ethnobotany to assess the reliability of the information (Mipun et al., 2019). The concept of quantitative ethnobotany is relatively new, and the term itself was coined only in 1987 by Prance and his co-workers (Prance 1991). The technique is to directly analyze contemporary plants using data and understand how important these plants are to ethnic and indigenous cultures (Phillips and Gentry 1993). Such studies could advance the traditional approach by incorporating appropriate quantitative research methods in ethnobotanical data collection, processing, and interpretation (Hoft et al. 1999; Ong & Kim 2014; Teklehaymanot and Giday 2010). Quantitative ethnobotanical studies so far have been able to measure the various uses of the plants as food, veterinary medicine, remedies for human disease, and other economic values (Pieroni 2001; Upadhyay et al. 2011; Kim and Song 2013).

The ethnobotanical information is gathered by conducting surveys among the Adi-Komkar community; an appropriate quantitative method is applied to analyze the data that will help understand the importance of such data in the life/society of the people and will assist in framing appropriate strategies to manage the scientific base properly. It also attempts to document the traditional ethnobotanical knowledge of the Komkar people, a subgroup of the Adi community, which, it is expected, will record some new uses of known useful plants or the plants that were not recorded earlier ethnobotanically.

**MATERIALS AND METHODS**

**Study area**

The study was conducted from 2016 to 2019 in Komkar-Adi Biocultural Landscape (three villages Rasing, Sijer, and Buksang) falling under the Geku Circle of Upper Siang District of Arunachal Pradesh. These villages are inhabited by the Komkar sub-group of the Adi tribe. The Adi’s are known for their rich traditional knowledge in the whole state, as this tribe is widespread throughout a long belt of this Himalayan state. Each sub-group has adapted to their environment differently, using different plants for their requirements. Hence, it is urgent to document their traditional knowledge to safeguard their tribal heritage.

Only three villages were selected because the population of Komkar people is not that high. Even today, they strictly adhere to their traditional cultures and customs, thereby offering the most harmonious society to study their traditional knowledge. The area is bounded east by Simong and Maryang, west by Karko and Pangkang, north by Yingkong, and in the south by Geku and Dite-dime villages.

The central coordinates of Komkar’s inhabiting area are 28.464334° N and 95.091789° E with an elevation of c. 298 m a.m.s.l. The region enjoys a humid subtropical climate with wet summer and mild winter seasons, and the temperature ranges between 29.5°C and 17.7°C. The average annual rainfall is 2,972.7 mm. The vegetation type of the area is chiefly Subtropical; the dominant trees of the site are *Ostodes paniculata, Artocarpus heterophyllus, Rhus chinensis, Toxicodendron hookeri, Pterospermum acerifolium, Castanopsis indica, Erythrina stricta*, etc. Adi-Komkar people are primarily dependent on forests for most of their requirements (nutritional, cultural, and medicinal), whereas their primary occupation is agriculture (both humid and wetland cultivation). They mostly follow the old traditional faith and belief system often referred to as ‘Donyi Polo.’

**Figure 1.** Location of Komkar-Adi Biocultural Landscape, Upper Siang District of Arunachal Pradesh, India
Data collection
A total of 41 respondents were interviewed from different households, falling into both the gender and different age-class categories [15-35 years, 35-60 years, and above 60 years]. The respondents were selected on their livelihood pattern and those who frequently access the forests, village heads, traditional healers, and aged people. Data was collected from the sample households through interviews using various participatory rural appraisal tools like semi-structured questionnaires, personal interviews, group discussions, and transect walks with the core respondents for field validation. The mandatory Prior Information Consents (PIC) were taken from the village/community heads. Voucher specimens were later identified using different literature (Kanjilal et al. 1934-1940; Hooker 1872-1897; Hajra et al. 1996; Giri et al. 2008; Chowdhery et al. 2009) and matched at ARUN and ASSAM Herbaria. The specimens will be deposited in the Herbarium of Arunachal University (HAU), Department of Botany, Rajiv Gandhi University, Rono Hills, Doimukh, Arunachal Pradesh for future references.

Data analysis
Data collected was analyzed using three quantitative indices following Sharma et al. (2012) and Pardo-de-santayana (2003) and are (i) Use value (UV), (ii) Relative Frequency of Citation (RFC), (iii) Relative Importance Index (RI) and (iv) Cultural Importance Index (CI).

\[ UV = \frac{U}{n} \]

Where U is the number of use reports cited by every respondent for a given species and n is the total number of respondents interviewed. The UV is high when there are many valuable reports for a given species, which implies that the taxa are essential. When there are few reports related to its use, the UV decreases.

Relative Frequency of Citation (RFC) is calculated using the following formula:

\[ RFC = \frac{FCs}{N} \]

Where FC is the Frequency of Citation and N is the number of informants participating in the survey. This index ranges from 0-1; when the RFC index is 0, nobody refers to the plant as necessary, and 1 indicates that all informants in the survey refer to the plant as required.

Relative Importance Index (RI) is calculated using the following formula:

\[ RI = \frac{[RFCs (max) + RNUs(max)]}{2} \]

Where RFCs is the relative frequency of citation over the maximum and RNUs is the close number of use categories over the top, viz., it is obtained by dividing the number of uses of the species (NUs) by the maximum value in all the species of the species, \([RNUs (max) = NUs/Max (NU)]\). The value ranges from 0-1; when the RI index is 0, nobody mentions any use of the value. When the RI index is 1, the plant was the most frequently mentioned as useful in the maximum number of use categories.

Cultural Importance Index (CI) is calculated using the following formula:

\[ CI = \sum_{i=1}^{n} \sum_{i=1}^{n} UR_{ij}/N \]

For example, in the case of the Artemisia indica, 25 informants out of 50 reported this species as useful in the general category, and there is no other use category. Hence, CI \(_{A. indica} =25/50=0.5 \]

RESULTS AND DISCUSSION

Results
A total of 301 taxa falling in 203 genera and 85 families are used by the people of Komkar-Adi Biocultural Landscape (Table S1). Of which 93.36% (281) are angiosperms, pteridophytes 3.98% (12) and Fungi 2.66% (8). 235 taxa were native to the region, whereas 57 are exotics (POWO 2019).

Among the plant-parts used, fruits showed the highest frequency of uses (23.75 %), followed by leaves (19.35 %), tender shoots (11.43 %), whole plants (7.91 %), seeds (6.15 %), flowers (3.51 %), rhizome (3.22 %), fronds (2.93 %), stem (2.93 %), sporocarp (2.34 %), bark (2.05 %), culms (1.75 %), inflorescence (1.46 %), petiole (1.46 %), rootstocks (1.46 %), twigs (1.46 %), stem pith (1.17 %), tubers (1.17 %), endosperm (0.87 %), mid veins (0.87 %), corms (0.58 %), bulbils (0.29 %), calyx (0.29 %), leaf sheath (0.29 %), lignotuber (0.29 %), resin (0.29 %), roots (0.29 %) and sap (0.29 %).

Dividing into use categories, it was found that the majority of the plants fall under food (54.13%) followed by medicine (15.94%), rituals beliefs and customs (11.11%), household materials (4.84%), fishing (2.56%), hunting (2.56%), masticatory (2.56%), construction (2.27%), fodder (1.7%) and fencing (0.85%).

Considering the habit groups, the tree was the most dominant with 72 spp. (23.92 %), followed by annual herbs (58 spp., 19.26%), shrubs (45 taxa, 14.95%), perennial herb (40 spp., 13.28%), Geophytic herbs (17 spp., 5.64%), a shrubby climber (12 spp., 3.98%), liana (11 spp., 3.65%), an herbaceous climber (10 spp., 3.32%), fungal fruit body (8 spp., 2.65%), bamboo (7 spp., 2.32%), epiphytes (7 spp., 2.32%), suffrutescents (5 spp., 1.66%), palm (4 spp., 1.32%), geophytic climbers (3 spp., 0.99%), root parasite and stem parasite with one species each (0.33%). The surrounding vegetation was forest-dominated, which might have provided facilities to test more tree species. However, in open areas, along the forest margins, besides marshlands, around the settlements, etc., herbaceous plants are dominant, so, are coming easily into view and contact people and are mostly used.

Use value (UV) of all the reported species ranges between 0.017 and 0.051 (Table S1). The plants with the highest UV indicate species considered most important by
the Adi people for their repeated treatment use. And those species are conserved locally by following cultivation practices in their respective home gardens and community lands due to their high harvesting pressure. A total of 48 ethnomedicinal plant species, including herbs, shrubs, and trees, are used to cure 35 different ailments. Solanum spirale is considered the most important as it predominates in the landscape and is mentioned by a higher number of informants (FC=52). Table 1 shows a comparison between three different indices CI, RFC, and RI, indicating species ranking based on each index and the three fundamental values of the study, viz. FC, UR, and NU for each species.

| Botanical name                          | Basic values | Indices |
|-----------------------------------------|--------------|---------|
|                                        | FC | UR | NU | CI | RFC | RI |
| Agapetes macrantha var. grandiflora     | 15 | 15 | 1  | 0.26 | 0.26 | 0.27 |
| Ageratum conyzoides                     | 30 | 50 | 3  | 0.86 | 0.52 | 0.66 |
| Ageratum houstonianum                   | 15 | 22 | 2  | 0.38 | 0.26 | 0.39 |
| Arenga obtusifolia                      | 16 | 25 | 2  | 0.43 | 0.28 | 0.40 |
| Artemisia indica                        | 23 | 30 | 2  | 0.52 | 0.40 | 0.47 |
| Bamusa tuldula                          | 32 | 48 | 4  | 0.83 | 0.57 | 0.82 |
| Begonia aborensis                       | 17 | 31 | 2  | 0.53 | 0.29 | 0.41 |
| Begonia griffithiana                    | 17 | 27 | 2  | 0.47 | 0.29 | 0.41 |
| Begonia bilanensis                      | 36 | 55 | 2  | 0.95 | 0.62 | 0.60 |
| Blumea balsimifera                      | 28 | 32 | 2  | 0.55 | 0.48 | 0.52 |
| Brachystemma calycinum                  | 22 | 22 | 1  | 0.38 | 0.38 | 0.34 |
| Bryophyllum pinnatum                    | 25 | 40 | 2  | 0.69 | 0.43 | 0.49 |
| Centella asiatica                       | 32 | 51 | 3  | 0.88 | 0.55 | 0.68 |
| Chromolaena odorata                     | 22 | 30 | 2  | 0.51 | 0.37 | 0.46 |
| Clerodendron colebrookeanum             | 51 | 55 | 2  | 0.95 | 0.88 | 0.74 |
| Curcuma caesia                          | 20 | 33 | 2  | 0.57 | 0.34 | 0.44 |
| Curcuma longa                           | 45 | 55 | 2  | 0.95 | 0.78 | 0.68 |
| Cyclosorus parasiticus                  | 25 | 25 | 1  | 0.43 | 0.43 | 0.37 |
| Dendrocalamus hamiltonii                | 36 | 52 | 3  | 0.90 | 0.62 | 0.72 |
| Dendrocnide sinuata                     | 37 | 51 | 2  | 0.88 | 0.64 | 0.61 |
| Euphorbia royleana                      | 34 | 49 | 2  | 0.84 | 0.59 | 0.58 |
| Garcinia pedunculata                    | 32 | 49 | 2  | 0.84 | 0.55 | 0.56 |
| Hedysit scandens                        | 30 | 47 | 2  | 0.81 | 0.52 | 0.54 |
| Houttuynia cordata                      | 41 | 55 | 3  | 0.95 | 0.71 | 0.77 |
| Kaempferia galanga                      | 18 | 18 | 1  | 0.31 | 0.31 | 0.30 |
| Melotheria heterophylla                 | 28 | 45 | 3  | 0.78 | 0.48 | 0.64 |
| Mikania micrantha                       | 19 | 33 | 2  | 0.57 | 0.33 | 0.43 |
| Morus macroara                          | 22 | 30 | 2  | 0.52 | 0.38 | 0.46 |
| Neprolepsis cordifolia                  | 17 | 17 | 1  | 0.29 | 0.29 | 0.29 |
| Nicotiana tabacum                       | 40 | 45 | 2  | 0.78 | 0.69 | 0.63 |
| Oryza sativa                            | 26 | 37 | 2  | 0.64 | 0.45 | 0.50 |
| Oxalis corniculata                      | 20 | 20 | 1  | 0.34 | 0.34 | 0.32 |
| Paeferia foetida                        | 36 | 54 | 2  | 0.93 | 0.62 | 0.60 |
| Paris polyphylla                        | 50 | 55 | 3  | 0.95 | 0.86 | 0.86 |
| Photos scandens                         | 31 | 33 | 2  | 0.57 | 0.53 | 0.55 |
| Phrynum pubinerve                       | 27 | 38 | 2  | 0.66 | 0.47 | 0.51 |
| Psidium guajava                         | 19 | 27 | 2  | 0.47 | 0.33 | 0.43 |
| Pueraria Montana                        | 13 | 21 | 2  | 0.36 | 0.22 | 0.38 |
| Rhus chinensis                          | 49 | 50 | 2  | 0.86 | 0.84 | 0.72 |
| Ricinus communis                        | 40 | 53 | 3  | 0.91 | 0.69 | 0.76 |
| Setaria italic                          | 10 | 16 | 2  | 0.28 | 0.17 | 0.35 |
| Solanum spirale                         | 52 | 53 | 2  | 0.91 | 0.90 | 0.75 |
| Solanum viarum                          | 35 | 52 | 2  | 0.90 | 0.60 | 0.59 |
| Solanum violaceum                      | 39 | 43 | 2  | 0.74 | 0.67 | 0.63 |
| Urtica dioica                           | 49 | 57 | 4  | 0.98 | 0.84 | 0.97 |
| Urtica parviflora                       | 15 | 15 | 1  | 0.26 | 0.26 | 0.27 |
| Zanthoxylum armatum                     | 36 | 46 | 2  | 0.79 | 0.62 | 0.60 |
| Zingiber officinale                     | 29 | 39 | 2  | 0.67 | 0.50 | 0.53 |
| Zingiber sianginensis                   | 28 | 35 | 3  | 0.60 | 0.48 | 0.64 |
According to the CI index, Urtica dioica is the most culturally significant, with a value of 0.98. Along with 49 citations (FC) and 57 use reports (UR). It is followed by Paris polyphylla with the CI of 0.94 (FC=50 and UR=55), Houttuynia cordata (CI=0.94, FC=51 and UR=55), Curcuma longa (CI=0.94, FC=45 and UR=55), Clerodendrum colebrookeanum (CI=0.94, FC=51 and UR=55) and Begonia silietensis (CI=0.94, FC=36 and UR=55). The highest RI value (0.97) of *Urtica dioica* signifies greater importance to its multiple uses, and the species was mentioned in a higher number of use categories (NU=4). The result found that *Urtica dioica*, Solanum spirale, Paris polyphylla, Curcuma longa, Clerodendrum colebrookeanum, and Begonia silietensis are largely used by the community in the treatment of human and animal diseases.

**Discussion**

The plants reported in this study is far more than the earlier studies conducted on the Adi tribe, residing in different regions of the Arunachal Pradesh by Tag et al. (2008); Srivastava and Adi community (2009); Yumnam et al. (2011); Boko et al. (2014); Kumar et al. (2015); Murtem and Chaudhry (2016); Bhuyan et al. (2017); Ayam et al. (2017); Jeyaprakash et al. (2017).

The dependence of these people on ethnobotanical resources may be due to their well-known health benefits or feeling the mere pleasure of gathering, recreation, and enjoying exquisite natural flavors (Pardo-de-Santayana et al., 2007). Their vast traditional knowledge of wild edible plants used by the community is time-tested, eco-friendly, and supportive of livelihood. Traditional knowledge of their ancestors regarding the food habits and the location of their settlements in biodiversity-rich remote Himalayan corners always provided natural resources for their survival. Also, the scarcity of cultivable land forced them to lead a lifestyle where they partially practiced agriculture and depended on available bioresources in their surroundings. It has been observed that among the 301 plants, more than half were used as different types. Some plants are commonly consumed by every household and have one or more types of uses, such as Asystasia neesiana, Deeringia amaranthoides, Dioscorea alata, Fagopyrum esculentum, Piper pedicellatum, Zanthoxylum oxyphyllum, Clerodendrum glandulosum, Arenga obtusifolia, Calamus Erectus, and Houttuynia cordata. These essential plants represent the core of wild food plants for the people of Komkar-Adi Biocultural Landscape. This is because of the frequent distribution and easy availability in the region. The use of such fantastic resources for providing additional needs has also paved its way into the semi-domestication of some plants in their backyards and kitchen gardens. It includes *Fagopyrum esculentum*, *Piper pedicellatum*, *Clerodendrum colebrookeanum*, *Asystasia neesiana*, *Deeringia amaranthoides*, *Arenga obtusifolia*, and *Houttuynia cordata*.

Ethno-medicines also play a vital role in the rugged terrains, where advanced medical facilities are not yet to be available. Their ethnomedicinal knowledge speaks of their medical history and common ailments. In the present study, 32% of the medicinal plants are reported to treat gastrointestinal disorders, nearly one-fourth of the total plants used by the whole of the Adi tribe (Kagyung et al., 2010). A total of 31 plant species has been recorded to treat a variety of disorders which is higher than the plants used by the Minyong sub-tribe as reported by Baruah et al. (2013) and far more than the total species recorded by Danggen et al. (2018), Gibji et al. (2012) for the Adi tribe of Eastern Himalaya. This study also recorded 9 species of ethnoveterinary knowledge used by the local healers.

A comparison with all the available literature related to the ethnobotanical resources of the Adi tribe (Mibang et al. 2003, Singh et al. 2007a, Singh et al. 2007b, Rethy et al. 2010, Khongsai et al. 2011, Nimasow et al. 2012, Payum et al. 2014, Chetry et al. 2018, Nanda et al. 2018) revealed that 19 plants (Agapetes macrantha var. Grandiflora, Arenga obtusifolia, Begonia aboresensis, Begonia acetosella, Begonia silietensis, Blumea balsamifera, Brachystemma calycinum, Dendrocnide sinuata, Kaempferia galanga, Morus macroura, Nephrolepis cordifolia, Oryza sativa, Phrynium pubinerve, Rhus Chinensis, Setaria italica, Solanum violaceum, Solena heterophylla, Urtica ardens, and *Urtica dioica*) are a new record for ethnomedicinal uses by the tribe. Four species (Ageratum conyzoides, Ageratum houstonianum, Bryophyllum pinnatum, and *Solanum spirale*) are new records for medicinal uses against different ailments. Another two species (Euphorbia royleana and *Nicotiana tabacum*) are reported as new for ethnoveterinary user benefits. Calculating the quantitative indices found *Urtica dioica*, *Solanum spirale*, *Paris polyphylla*, *Curcuma longa*, *Clerodendrum colebrookeanum*, and *Begonia silietensis* are the most important plant species used by the Komkar Adi in the treatment of various ailments. More work needs to be done on those particular plants with higher values to validate their traditional medicinal uses and check their bioactive constituents for further drug development. This type of study could open a new path for future pharmacological research, serving as a reference for dealing with the rich ethnobotanical knowledge of diverse ethnolinguistic indigenous groups.

It is also observed that exotic elements such as *Bidens pilosa*, *Chromolaena odorata*, *Ageratum conyzoides*, *Nasturtium microphyllum*, *Erigeron Canadensis*, etc. have gradually entered into the traditional knowledge livelihood system of the Komkar-Adi, as food and medicine.

Hunting and fishing have played a vital role in the lifestyle of tribal people. Apart from their protein needs, it has always been a favorite pastime for youths. Since time memorial, they have been using innovative techniques and traps. A total of 18 plants is recorded here used in their traditional ways of fishing and hunting, either as baits, as poison, adhesive, etc., which is half the number of species reported by Yumnam and Tripathi (2013) for the entire Adi community.

Some plants or groups are sometimes given particular importance due to their long history of extensive use. Bamboos are part and parcel of the life of Adi people and are used in innumerable ways. Sharma and Borthakur (2008) reported different benefits of 15 species of bamboos by the whole Adi community, twice the number (8 spp.)
reported in the present study. Similarly, for the wild or local species of *Allium*, as many as 9 species are known to occur in the region (Devii et al. 2014), and the Adi-Komkar community is using only 2 of them.

Traditional knowledge also became important in their art of living. Different phenophases of some plants are found to use as biological indicators. For example, flowering and fruiting of many plants embark seasons, acting as biological indicators. The Adi people are primarily agricultural. *Capparis Multiflora* and *Melastoma malabathricum* blooms in April, and that flag-off the time to broadcast paddy seeds. Similarly, the blooming of *Erythrina stricta* indicates the time for cultivating different types of beans in the region. Similar to the phenology of such plants primarily due to climatic imbalance causes damage to their livelihood crops.

The Adi people are primarily followers of Donyi-Polo (the Sun and Moon), where they keep faith in Nature like God. Hence, Nature and its associated myths play a vital part in their rural lifestyle. Since time immemorial, the Komkar-Adi have lived in complete harmony with plants while harvesting their daily minimum requirements from the forest for their survival. The example of the erection of gates along the village boundary with the long and spreading fronds of *Cyathia gigantea* for controlling the spread of infectious diseases is one such example. They firmly believe that the tree fern possesses divine power that ensures the community’s security, health, and prosperity. Such plants are not frequently harvested except for ritual purposes. This idea underlies the conservation ethics of the communities associated with many plant species, including the tree-ferns, due to their close association with nature.

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### Table S1. List of ethnobotanicals used by the Adi-Komkar tribe in Arunachal Pradesh, India

**Abbreviations used:** Habit: B: Bamboo; HA: Annual Herb; HG: Geophytic Herb; HP: Perennial Herb; CG: Geophytic Climber; CH: Herbaceous Climber; CS: Shrubby Climber; E: Epiphyte; FB: Fungal fruit-body; L: Liana; P: Palm; PR: Root Parasite; PS: Stem Parasite; SF: Suffrutaceous; S: Shrub; T: Tree. Uses: F: Food; M: Medicine; H: Hunting; Fb: Fishing; RBC: Rituals, beliefs, and Customs; O: Others; C: Construction; HHM: House Hold Materials; Fd: Fodder; Mst: Masticatory; Fn: Fence. **Plants Parts used:** Br: Bark; Bu: Bulbil; Cm: Culm; Cr: Corm; Cy: Calyx; En: Endosperm; Fl: Flower; Fm: Frond; Fr: Fruit; In: Inflorescence; Lf: Leaf; Lsp: Leaf-sheath powder; Lt: Lignotuber; Lx: Latex; Pt: Petiole; Re: Resin; Rh: Rhizome; Rs: Tuberous Root Stock; Rt: Root; Sa: Sap; Sd: Seed; Sp: Stem pith; St: Stem; Ts: Tender Shoot; Tu: Tubers; Tw: Twig; Vn: Vein; Wh: Whole plant. **Distribution:** E: Exotic; N: Native; -: not known.

| Botanical name [Family]; Voucher specimen | Adi-Komkar name | Habit | Part used | Used and application | Distribution | Use value (UV) |
|-------------------------------------------|-----------------|-------|-----------|----------------------|-------------|---------------|
| Acacia rugata (Lam.) Fawc. & Rendle [Fabaceae]; MT-1501 | Ranger laang | L | Br | Fh: Paste mixed in water to stupefy fishes | N | 0.017 |
| Acmella oleracea (L.) R.K. Jansen [Asteraceae]; MT-1507 | Marshang | HA | Ts | F: Cooked as a vegetable | E | 0.017 |
| Acmella paniculata (Wall.ex DC.) R.K. Jansen [Asteraceae]; MT-1528 | Marshang-haali | HA | Lf | F: Cooked as a vegetable | E | 0.017 |
| Aconitum ferox Wall. ex Ser. [Ranunculaceae]; MT-1506 | Eemo | HP | Rh | H: Poisoning arrowheads for hunting | N | 0.017 |
| Actephila excelsa (Dalzell) Mull.Arg [Phyllanthaceae]; MT-1508 | Khamar-oying | S | Ts | F: Cooked as a vegetable | E | 0.017 |
| Aeschynanthus parasiticus C.B. Clarke [ Gesneriaceae]; MT-1503 | Epom marsi | E | Fl | RBC: believed to be of Jungle spirit’s property | N | 0.017 |
| Aeschynanthus micranthus C.B. Clarke [ Gesneriaceae]; MT-1504 | Epom marsi | E | Fl | RBC: believed to be of Jungle spirit’s property | N | 0.017 |
| Aeschynanthus monterius Dunn [ Gesneriaceae]; MT-1811 | Epom marsi | E | Fl | RBC: It is believed to be of Jungle spirits property | N | 0.017 |
| Aeschynanthus novogracilis W.T.Wang [A. gracilis C.S.P.Paris ex C.B Clarke] [ Gesneriaceae]; MT-1505 | Epom marsi | E | Fl | RBC: believed to be Jungle spirit’s property [spirit’s use red flowers as their chili. “Epom” means jungle spirit; “Marsi” means chilli] | N | 0.017 |
| Agapetes macrantha var. grandiflora (Hook.f.) D.Banik & Sanjappa [Eriaceae]; MT-1502 | Asi ponying | CS | Fl, Lt | F: Flowers edible; M: Paste of ligmotuber given topically to treat snake bite | N | 0.034 |
| Ageratum conyzoides (L.) L. [Asteraceae]; MT-1509 | Namsing eeing/ Migom Dampa | HA | Lf | M: Paste applied topically for cuts and wounds; juice gave orally in malaria | E | 0.017 |
| Ageratum houstonianum Mill.[Asteraceae]; MT-1734 | Namsing eeing/ Migom Dampa | HA | Lf | Paste applied topically on cuts and wounds to clot blood | E | 0.017 |
| Albizia odoratissima (L.f.) Benth. [Fabaceae]; MT-1550 | Tatkung | T | St | C: Trunk to make mortar for traditional paddy de-husking (Kili-par) | N | 0.017 |
| Allium chinense G.Don [Amaryllidaceae]; MT-1573 | Talab/ dilab | HA | Wh | F: Whole plants edible; RBC: crushed bulb applied on body as protection from snakes and wandering soul | E | 0.034 |
| Allium hookeri Thwaites [Amaryllidaceae]; MT-1634 | Disa talab/ byakung | HP | Lf, Rt | F: Leaves edible; RBC: roots taken as a necklace during a local festival, believes that will protect them from infectious diseases | N | 0.034 |
| Alocasia macrorrhizos (L.) G.Don [Araceae]; MT-1605 | Ruksin | HP | Wh | Fd: Cooked with paddy husk for pigs | E | 0.017 |
| Alpinia nigra (Gaertn.) Burtt [Zingiberaceae]; MT3110 | Gumba-bera | HG | Fr | F: Ripe ones eaten raw | N | 0.017 |
| Alpinia roxburghii Sweet [Zingiberaceae]; MT-1683 | Gumba-bera | HG | Fr | F: Ripe ones eaten raw | N | 0.017 |
| Altingia excelsa Noronha [Altingiaceae]; MT-1692 | Hirii/siri | T | Tw | RBC: With belief, twigs are tied to pillars to strengthen the roof | N | 0.017 |
| Amaranthus spinosus L. [Amaranthaceae]; MT-1565 | Tapi-pilee | HA | Ts | F: Cooked as a vegetable | E | 0.017 |
| Amaranthus viridis L. [Amaranthaceae]; MT-1564 | Tapi-pilee | HA | Ts | F: Cooked as a vegetable | N | 0.017 |
Anomum pterocarpum Thwaites [Zingiberaceae]; MT-1578
- Tag (plant), Jebo (Infloroescences) HG In F: Cooked as vegetable and in salad N 0.017

Anomum subulatum Roxb. [Zingiberaceae]; MT-1592
- Tag lii, Tadling lii HG Ts, Sd F: Tender shoot and aromatic seeds edible N 0.017

Amorphophallus kachinensis Engl. & Gehrm. [Araceae]; MT-1587
- Tahi eeging HG Cr H: Preparation of bait for rodents and birds E 0.017

Aralia armata (Wall. ex G. Don) Seem. [Araliaceae]; MT-1552
- Tataterung T Ts F: Edible N 0.017

Ardisia solanacea (Poir.) Roxb. [Primulaceae]; MT-1680
- Go-yakpin S Lf F: Young ones edible N 0.017

Baccaurea ramiflora (DC.) C.B. Clarke [Begoniaceae]; MT-1594
- Tatsoi P Sp, Vn, LSP Fd: Stem pith and leaves as fodder for pigs and cattle; E 0.051

Begonia silhetensis L. [Asteraceae]; MT-1646
- Eeti-daadi Sf Lf, Tw M: Leaf-paste took orally in stomach disorder; RBC: twigs used in rituals performing on funeral N 0.034

Begonia roxburghii (Wall. ex G. Don) Seem. [Begoniaceae]; MT-1595
- Raami T Fr F: Taken raw when ripe, sour N 0.017

Baccaurea ramiflora L. [Begoniaceae]; MT-1718
- Koko-nyorung FB FB F: Cooked and eaten - 0.017

Artemisia indica Willd. [Asteraceae]; MT-1625
- Belang T St C: Trunk suitable for house-poles, big mortar (Kipar), and pestles (Eeeng) for paddy dehusking N 0.051

Artemisia indica Willd. [Asteraceae]; MT-1627
- Koko-nyorung FB FB F: Cooked and eaten - 0.017

Artocarpus heterophyllus Lam. [Moraceae]; MT-1622
- Raami T Fr F: Taken raw when ripe, sour N 0.017

Artocarpus lacucha Buch.Ham. [Moraceae]; MT-1779
- Obul HP Lf F: Cooked as a vegetable N 0.017

Ayastesiella neesiana (Wall.) Lindau [Acanthaceae]; MT-1742
- Koko-nyorung FB FB F: Cooked and eaten - 0.017

Auricularia auricula-judae (Bull.) J. Schott [Auriculariaceae]; MT-1717
- Koko-nyorung FB FB F: Cooked and eaten - 0.017

Auricularia polytricha (Mont.) Sacc. [Auriculariaceae]; MT-1718
- Genteng T Sd F: Aril on seeds edible N 0.017

Aralia armata (Wall. ex G. Don) Seem. [Begoniaceae]; MT-1594
- Bureng T Sd F: Aril on seeds edible N 0.017

Baccaurea ramiflora L. [Begoniaceae]; MT-1718
- Bureng T Sd F: Aril on seeds edible N 0.017

Balanophora dioica R. Br. ex Royle [Balanophoraceae]; MT-1558
- Taruk-langkaer PR Rh Mst: Chewed as chewing gum N 0.017

Bambusa tulda Roxb. [Poaceae]; MT-1631
- Dibang HP Ts, Cm F: Young shoots edible; M: fermented shoot used topically in inflammation, burns, and insect bites; HHM: culms for handicraft and construction N 0.051

Bauhinia purpurea L. [Fabaceae]; MT-3100
- Ogok T Ts F: Cooked as a vegetable N 0.017

Bauhinia variegata L. [Fabaceae]; MT-1745
- Ogok T Ts F: Cooked as a vegetable N 0.017

Beaumontia grandiflora Wall. [Apoecynaceae]; MT-1636
- Dongko-riyo L Sd RBC: To decorate traditional hats “Lebro”-worn during war dance (Taapu) N 0.017

Benincasa hispida (Thunb.) Cogn. [Cucurbitaceae]; MT-1765
- Sisibaying HP Pt F: Eaten raw; HHM: To decorate traditional hats “Lebro”-worn during war dance (Taapu) N 0.034

Begonia aborescens Dunn [Begoniaceae]; MT-1595
- Sisibaying HP Pt F: Eaten raw; M: Dizziness, headache; eaten raw N 0.034

Begonia acutifolia Craib [Begoniaceae]; MT-1638
- Dumbo-leepang HP Pt F: Eaten raw, sour; M: Eaten raw against dizziness and headache N 0.034

Begonia palmata D. Don [Begoniaceae]; MT-1639
- Dumbo-leepang HP Pt F: Eaten, sour N 0.017

Begonia roxburghii A.DC. [Begoniaceae]; MT-1594
- Sisibaying HP Pt F: Eaten, sour N 0.017

Begonia silhetensiss (A.DC.) C.B. Clarke [Begoniaceae]; MT-3101
- Sisibaying HP Pt F: Eaten raw, sour; M: Also eaten raw against dizziness and headache N 0.034

Benincasa hispida (Thunb.) Cogn. [Cucurbitaceae]; MT-1765
- Sisibaying HP Pt F: Eaten raw, sour; M: Also eaten raw against dizziness and headache N 0.034

Bidas pilosa L. [Asteraceae]; MT-1553
- Pau/ paar CH Fr F: Cooked as a vegetable N 0.017

Blumea balsamifera (L.) DC. [Asteraceae]; MT-1655
- Tasso-lepyo HA Ts F: Cooked as a vegetable N 0.017

Boehmeria penduliflora Wedd. ex D.G. Long [Urticaceae]; MT-1740
- Nyot-kyang S Lf Fd: Fodder for Bos frontalis N 0.017

Boehmeria penduliflora Wedd. ex D.G. Long [Urticaceae]; MT-1740
- Nyot-kyang S Lf Fd: Fodder for Bos frontalis N 0.017
| Species                                                                 | Name            | Part | Use                                                                 | Value |
|------------------------------------------------------------------------|-----------------|------|---------------------------------------------------------------------|-------|
| **Boehmeria pilosiascula** (Blume) Hassk. [Urticaceae]; **MT-1739**   | Nyot-kyang      | S Lf | Fd: fodder for **Bos frontalis**                                     | 0.017 |
| **Boeica fulva** C.B. Clarke [Gesneriaceae]; **MT-1704**               | Jongkot         | S Lf | Mst: chewed raw as a substitute for betel leaves                     | 0.017 |
| **Bombax ceiba** L. [Malvaceae]; **MT-1699**                           | Hingyo gyomur   | T Fr | HHM: Seed floss as stuffing material for pillows                     | 0.017 |
| **Brachystemma calycinum** D. Don [Caryophyllaceae]; **MT-1746**       | Okin-parin      | HA Lf| Packed in **Phrynium pubinerve** leaves, warmed and locally applied cure cracked sole | 0.017 |
| **Brassaiopsis glomerulata** (Blume) Regel [Araliaceae]; **MT-1579**   | Tagor           | T Sp | RBC: Dried pith cut into small square blocks to decorate traditional hat “Leehro”-worn during war dance (Taupu) | 0.017 |
| **Brassica juncea** (L.) Czern [Brassicaceae]; **MT-1791**              | Pettu           | HA Sd| RBC: Burnt to protect the home from evil forces                      | 0.017 |
| **Brassica nigra** (L.) K. Koch [Brassicaceae]; **MT-1771**             | Pettu tulang    | HA Sd| RBC: Burnt to protect the home from evil forces                      | 0.017 |
| **Brugmansia suaveolens** (Hubm. & Bonpl. ex Willd.) Sweet [Solanaceae]; **MT-1546** | Toti           | S Wh | Fc: To barricade against trespassing of animals through paddy field [plants poisonous, so animals so avoid going near it] | 0.017 |
| **Bryophyllum pinnatum** (Lam.) Oken [Kalanchoe pinnata] (Lam.) Pers. [Crassulaceae]; **MT-1650** | Eme kusureng    | HP Lf| M: Sap applied on burns and inflammation                             | 0.017 |
| **Cajanus cajan** (L.) Millsp. [Fabaceae]; **MT-1769**                  | Peradh          | S Sd | F: Cooked as pulse                                                  | 0.017 |
| **Calamus erectus** Roxb. [Arecaceae]; **MT-1562**                     | Tara            | L Ts, Fr, Lf | F: Raw as well as roasted tender shoots edible; fruits sour; St | 0.051 |
| **Calamus flagellum** Griff. ex Mart. [Arecaceae]; **MT-1541**          | Yoi             | L Ts, Fr, St | F: Tender shoots and ripe fruits edible; HHM: Prickly smoked stem used as a grinder | 0.034 |
| **Callicarpa arborea** Roxb. [Lamiaceae]; **MT-3102**                   | Lalu            | T Br | Mst: Bark has chewed with **Rabais moluccanus** leaves as a substitute for betel nut | 0.017 |
| **Canarium strictum** Roxb. [Burseraceae]; **MT-1687**                 | Hilum           | T Fr, Re | F: Fruits edible; O (MR): dry resin as fragrant incense or as mosquito repellant | 0.034 |
| **Canna indica** L. [C. edulis Ker Gawl.], [Cannaceae]; **MT-1707**     | Kampir eengin   | HP Rh | F: Cooked and eaten                                                  | 0.017 |
| **Capparis multiflora** Hook. f. & Thomson [Capparaceae]; **MT-1776**   | Remsap          | CS Fl | RBC: Its blooming indicate the time for paddy transplantation         | 0.017 |
| **Capsicum frutescens** L. [Solanaceae]; **MT-1767**                    | Peepit marsi    | HP Fr | F: As spice in different food preparations                           | 0.017 |
| **Cardamine hirsuta** L. [Brassicaceae]; **MT-1751**                    | Oram-petskik    | HA Wh | F: Cooked as a green vegetable                                       | 0.017 |
| **Carex baccans** Nees [Cyperaceae]; **MT-1677**                       | Gemin-taabeng/tapok | HP Wh | RBC: Believed that **Carex baccans** and **Saccharum aruninaceum** came from the same ancestor, so they use whole plants together in funeral rituals | 0.017 |
| **Caryota urens** L. [Arecaceae]; **MT-1570**                           | Tamak           | P St | HHM: Split stem used for making traditional weaving                  | 0.017 |
| **Casearia varecaRoxb. [Salicaceae]; **MT-1597**                        | Sipe-siipe      | S Fr | H: Ripe ones used as bait in the traditional trap (Eka) to hunt birds and rodents | 0.017 |
| **Castanopsis indica** (Roxb. ex Lindl.) A.DC. [Fagaceae]; **MT-1602**  | Sirang          | T En | F: Endosperm eaten raw or roasted                                   | 0.017 |
| **Castanopsis purpurella** (Miq.) N.P.Balakr. [Fagaceae]; **MT-1618**   | Angke           | T En | F: Endosperm eaten raw or roasted                                   | 0.017 |
| **Centella asiatica** (L.) Urb. [Apiaceae]; **MT-1711**                 | Kiiling kiipum  | HA Wh | M: Plant paste is taken orally to treat gastrointestinal disorder    | 0.017 |
| **Chassalia curviflora** var.**ophoxyloides** (Wall) Deb & B.Krishna [Rubiacae]; **MT-1724** | Longkin/sityung oying | S Ts | F: Cooked as a vegetable                                           | 0.017 |
| **Chenopodium album** L. [Amaranthaceae]; **MT-1700**                   | Jili-mili       | HA Ts | F: Cooked as a vegetable                                           | 0.017 |
| **Chenopodium giganteum** D.Don [Amaranthaceae]; **MT-1616**            | Amateng         | HA Ts | F: Cooked as a vegetable                                           | 0.017 |
| Scientific Name | Common Name | Part Used | Benefits | Notes |
|----------------|-------------|-----------|----------|-------|
| Choerospondias axillaris (Roxb.) B.L.Burtt & A.W.Hill | Belam | T | Fr | F: Ripened ones sweet and edible; H: Also used as bait for hunting deer |
| Chromolaena odorata (L.) R.M.King & H.Rob. [Asteraceae]; MT-1595 | Ingkir | Sf | Lf | Paste applied on cuts as a hemostat |
| Cinnamomum bejonshota (Buch.-Ham.) Sweet [Lauraceae]; MT-1690 | Hipir ayin | T | Fr | F: Young ones steamed as chutney |
| Cinnamomum verum J.Presl [Lauraceae]; MT-1596 | Siri poni | T | Br | F: Aromatic bark as a spice |
| Citrus × aurantium L. [Rutaceae]; MT-1715 | Kintirang | T | Fr, Sd | F: Ripened ones eaten raw, sweet; H: Seeds as bait in traditional hunting trap (Eetku) for rodents |
| Citrus indica Yu. Tanaka [Rutaceae]; MT-1681 | Goyeng-hungiin | T | Fr | F: Ripened ones sour, taken raw |
| Citrus latipes (Swingle) Yu.Tanaka [Rutaceae]; MT-1809 | Hinnong/hungiin T | T | | F: Taken raw, sour, |
| Citrus maxima (Burm.) Merr. [Rutaceae]; MT-1714 | Kintee | T | Fr, Tw | F: Ripened ones eaten raw; RBC: Twigs used in rituals done for health and prosperity and to restrict negative forces |
| Citrus medica L. [Rutaceae]; MT-1688 | Hingkom | S | Fr | F: Taken raw, sour |
| Clathrusruber P.Micheli ex pers. [Phallaceae]; MT-1518 | Menut-taput | F | FB | Their bizarre looks signify an evil nature |
| Clerodendrum colebrookeanum Walp [Lamiaceae]; MT-1517 | Ongin | S | Lf | F: Cooked as a vegetable; M: In hypotension and cough: cooked and eaten |
| Coix lacryma-jobi L. [Poaceae]; MT-1805 | Ayak | HA | Sd | F: Fermented Nokyn is prepared from self-made yeast ‘siye.’ |
| Colocasia esculenta (L.) Schott [Araceae]; MT-1651 | Enge (corm); Ngerek/ ngekong (tender leaf) | HP | Cr, Lf | F: Corm and young leaves cooked as a vegetable |
| Corchorus capsularis L. [Malvaceae]; MT-1516 | Olab | HA | Lf | F: Taken as a vegetable |
| Cordia dichotoma G.Forst [Boraginaceae]; MT-1514 | Jongge | T | Fr | O: Sticky mesocarp as glue for light materials like paper |
| Crassocephalum crepidioides (Benth.) S.Moore [Asteraceae]; MT-1515 | Eeli | HA | Ts | F: Taken cooked as a vegetable |
| Cucumis melo L. [Cucurbitaceae]; MT-1513 | Mari | CH | Fr | F: Ripened ones eaten raw |
| Cucurbita maxima Duchesne [Cucurbitaceae]; MT-1512 | Tapa (fruit); Payin (tender shoot) | CH | Fr, Ts | F: Cooked and served as a vegetable |
| Curcuma caesia Roxb. [Zingiberaceae]; MT-1510 | Kala haaldi | HP | Rh | M: Raw paste in water taken internally in empty stomach to cure acidity and gastritis |
| Curcuma longa L. [Zingiberaceae]; MT-1511 | Haaladi | HP | Rh | M: Paste of rhizome is applied on the incision during vasectomy and tubectomy of cattle and even for bone fracture |
| Cyathea gigantea (Wall. ex Hook.) Holttum [Alsophila gigantea Wall. ex Hook. [Cyatheaceae]; MT-1519 | Ngepi | T | Fn | RBC: Believe that gates prepared with these fronds prevent the spread of infectious diseases inside the boundary |
| Cyathea spinulosa Wall. ex Hook. [Alsophila spinulosa (Wall. ex Hook.) R.M.Tryon [Cyatheaceae]; MT-1554 | Tasse | T | Sp | F: Taken as a famine food |
| Debregaasia longifolia (Burm.f.) Wedd. [Urticaceae]; MT-1741 | Nyt-kyang | S | Lf | Fd: Fodder for Bos frontalis |
| Deeringia amaranthoides (Lam.) Merr. [Amaranthaceae]; MT-1747 | Oko-libo | CS | Ts | F: Cooked and served as a vegetable |
| Scientific Name                                | Common Name                  | Part Used | Plant Part | Beliefs, Uses                                                                 |
|-----------------------------------------------|------------------------------|-----------|------------|-------------------------------------------------------------------------------|
| *Erythrina stricta* Munro [Poaceae]: MT-1653  | Epo                          | B         | Cm, Ts     | HHM: Making traditional utensils: jug (Pekak), plate (Ekung), spoon (Penyo), filtering local beverages Kaksur and Apong; C: making house-floor (Tasur); F: Tender shoot cooked as a vegetable or preserved as fermented food items like ‘Huang’ and ‘Eyub.’ |
| *Erigeron canadensis* Nees & Arn. ex Munro [Poaceae]: MT-1643 | Etiing (young shoot); Ekung (fermented shoot) | B         | Ts, Cm     | F: Young shoots edible, fermented bamboo-shoot (Ekung), dried fermented-shoot (Eyub); M: fermented shoots applied on burns and insect bites; HHM: culms used for handicraft and construction |
| *Equisetum diffusum* L. [Apiaceae]: MT-1593    |                              |           |            |                                                                               |
| *Eleusine coracana* (L.) Merr. [Fabaceae]: MT-1730 |                              |           |            |                                                                               |
| *Duchesnea indica* (Dilleniaceae): MT-1593    | Sompa                        | T         | Cy         | RBC: Long petioles decomposed under mud, fibrous pith will turn dark blue and used as a belt (Beying), anklets, and bangles (Kongge) in earlier times |
| *Dimetia scandens* (Roxb.) R.J.Wang [Rubiaceae]: MT-1697 | Inkip-inkop                  | CH        | Ts, Tu     | F: Cooked as a vegetable; M: Tubers used for curing gastrointestinal disorders |
| *Dinochloa macclellandii* (Munro) Kurz [Poaceae]: MT-1581 | Tagir                        | B         | Cm         | C: Culms used as a rope to tie roofing leaves (Ekap) with the supporting pillars (Papir); HHM: Household articles; RBC: Rituals in ceremonies related to health issues |
| *Dioscorea alata* L. [Dioscoreaceae]: MT-1778  | Ramet                        | CG        | Rs         | F: Tuberous and served cooked as a vegetable or roasted                           |
| *Dioscorea bulbifera* L. [Dioscoreaceae]: MT-1652 | Engin                        | CG        | Rs         | F: Tuberous and served cooked as a vegetable or roasted                           |
| *Dioscorea esculenta* (Lour.) Burkhill [Dioscoreaceae]: MT-1832 | Ramet                        | CG        | Rs         | F: Tuberous and served cooked as a vegetable or roasted                           |
| *Dioscorea pentaphylla* L. [Dioscoreaceae]: MT-1544 | Uli                          | CG        | Bu         | F: Roasted to eat                                                              |
| *Diplazium esculentum* (Retz.) Sw. [Athyriaceae]: MT-1577 | Takang                       | HP        | Fn         | F: Young ones cooked as a vegetable                                             |
| *Duabanga grandiflora* (DC.) Walp. [Lythraceae]: MT-1716 | Kebo                         | T         | St         | C: Used as poles                                                               |
| *Duchesnea indica* (Jacks.) Focke [Rosaceae]: MT-1648 | Eki-tang-kip                 | HA        | Fr         | F: Ripe ones eaten raw, watery                                                  |
| *Elatostema dissectum* Wedd. [Urticaceae]: MT-1825 | Onu                          | HA        | Ts         | F: Eatenas salad or cooked as a vegetable                                       |
| *Eleusine coracana* (L.) Gaertn. [Poaceae]: MT-1730 | Mirung                       | HA        | Sd         | RBC: Burnt in fire or spread on the floor to scare the evil spirits             |
| *Entada parvifolia* Merr. [Fabaceae]: MT-1774  | Riilik                       | L         | Br         | O: Paste worked as a soap                                                      |
| *Entada phaseoloides* (L.) Merr. [Fabaceae]: MT-1773 | Ripik                        | L         | Br         | Fh: Root-bark used for stupefying fishes                                          |
| *Equisetum diffusum* D.Don [Equisetaceae]: MT-1603 | Sedom tapum/ sisi dangki     | HP        | Wh         | RBC: In rituals related to health and prosperity                                 |
| *Erigeron canadensis* L. [Asteraceae]: MT-1696  | Ingko-bodong                 | HA        | Ts         | F: Cooked and served as a vegetable                                             |
| *Eryngium foetidum* L. [Apiaceae]: MT-1614     | Ritak /Migom ori             | HP        | Lf         | E: Added to prepared food and salad for flavoring                               |
| *Erythrina stricta* Roxb.[Fabaceae]: MT-1582   | Tagat (Nonflowering state); Galling Appun (Blooming state) | T        | Wh         | RBC: Beliefs, plant forms a boundary between human beings and souls; mostly planted near graveyards so that the departed soul leave the village and move forward for the spiritual world and its blooming of the flower indicates the time for broadcasting bean seeds |

Beliefs, plant forms a boundary between human beings and souls; mostly planted near graveyards so that the departed soul leave the village and move forward for the spiritual world and its blooming of the flower indicates the time for broadcasting bean seeds.
Euphorbia patcherrima Willd. Ex Klotzsch [Euphorbiaceae]; MT-1838 -  
Byakok S Lx  
Fc: Used as barricades for trespassing animals in the paddy  
field, animals avoid it for its poisonous nature. Also, its  
showy bracts add to the beauty  

Euphorbia royleana Boiss. [Euphorbiaceae]; MT-1630  
Lompuk HA Lf  
M: Latex is pasted with *Nicotiana tabaccum* leaves to  
apply on infected wounds of cattle  

Fagopyrum esculentum Moench [Polygonaceae]; MT-1723  
Paapop T Fr  
F: Young leaves as a vegetable  

Ficus auriculata Lour. [Moraceae]; MT-1756  
Sirot T Wh  
RBC: Beliefs, jungle spirit live on this tree, so people do  
not cut the tree, if they cut it then jungle spirit will get  
angry and harm the villagers  

Ficus crassiramea (Miq.) Miq. [Moraceae]; MT-1601  
Ee beriti T Fr  
F: Ripe hypanthodia edible, sweet  

Ficus geocarpa Tejism. Ex. Miq. [Moraceae]; MT-1641  
Pasuk-payak/eki T Lf  
H: Ripe hypanthodia used as bait for birds  

Ficus heteropleura Blume [Moraceae]; MT-1790  
Tapang -  
F: Cooked and mixed with soya beans for quick  
fermentation  

Ficus hispida Lf. [Moraceae]; MT-1764  
Paameng T Fr  
RBC: Beliefs, jungle spirit live on this tree, so people do  
not cut it, if they cut it then jungle spirit will get angry and  
harm the villagers  

Ficus religiosa L. [Moraceae]; MT-1600  
Sirot T Wh  
F: Ripe hypanthodia edible, sweet  

Ficus semicordata Buch. Ham. ex Sm.[Moraceae]; MT-1574  
Takak T Fr  
F: Ripe hypanthodia edible, sweet  

Ficus simplicissima Lour. [Moraceae]; MT-1575  
Takpi T Lf  
F: Mixed with soybeans for fermentation  

Ficus tinctoria G.Forst. [Moraceae]; MT-1599  
Sirot T Wh  
RBC: As in *Ficus religiosa*  

Ficus variegata Blume [Moraceae]; MT-1588  
Taotik T Fr  
F: Ripe hypanthodia edible, sweet  

Ficus virens Aiton [Moraceae]; MT-1833  
S S Ts  
F: Cooked and served as a vegetable  

Fissistigma bicolor (Roxb.) Merr. [Annonaceae]; MT-1816  
Rika-riya L Fr  
F: Ripe fruits sweet, taken raw  

Fissistigma polygonatum (Hook. f. & Thom.). Merr. [Annonaceae];  
MT-1772  
Rika-riya S Fr  
F: Ripe fruits one raw, sweet  

Garcinia anomala Planch. & Triana [Clusiaceae]; MT-1561  
Taraak T Fr  
F: Edible, sour  

Garcinia lanceolifolia Roxb. [Clusiaceae]; MT-1560  
Taraak T Fr  
F: Edible, sour  

Garcinia pedunculata Roxb. ex Buch. Ham. [Clusiaceae]; MT-1586  
Tabing T Fr  
F: Ripe ones eaten raw, sweet; M: Smoked fruit wall taken  
orally to treat gastrointestinal problems  

Glycine max (L.) Merr. [Fabaceae]; MT-1770  
Peron-rontang HA Sd  
F: Local recipe naming *Peronl Ronyang* (fermented soya  
bean) is made of its seeds  

Gnaphalium polycaulon Pers. [Asteraceae]; MT-1758  
Paaput HA Lf  
F: Cooked as a vegetable  

Gonostegia hirta (Blume ex Hassk.) Miq. [Urticaceae]; MT-1755  
Oyik HA Ts  
F: Cooked as a vegetable  

Gynocardia odorata R.Br. [Achariaceae]; MT-1731  
Mundo-tulpi T Fr  
Fr: Paste mixed in water for stupefying fishes  

Gynura cusimbua (D.Don) S.Moore [Asteraceae]; MT-1743  
Ogen HA Lf  
F: Cooked as a vegetable  

Helixanthera parasitica Lour. [Loranthaceae]; MT-1555  
Tasik PS Fr  
F: Ripe ones eaten raw, sweet  

Helminthostachys zeylanica (L.) Hook.[Ophioglossaceae]; MT-1620  
Asi-bisi HG Fn  
F: Young ones cooked as a vegetable  

Heteropanax fragrans (Roxb.) Seem. [Araliaceae]; MT-1656  
Gaatum-bopang T Fr  
H: As bait to trap rodents and birds  

Hodgsonia macrocarpa (Blume) Cong. [Cucurbitaceae]; MT-1552  
Tatar-api L Sd  
F: Embryo edible after cooking  

Hornstedtia arnachalensis S. Tripathi & V.Praakash [Zingiberaceae];  
MT-1627  
Bele-belaak HG F1, Fr  
F: Flower buds and fruits eaten raw  

- Beleak: Fermented soya bean (RBC) 
- RBC: Beliefs
| Scientific Name | Common Name | Type | Uses | Notes |
|----------------|-------------|------|------|-------|
| **Houttuynia cordata** Thumb. [Saururaceae]; **MT-1610** | Rorang | HG | Wh, Lf | F: Whole plants edible; M: leaves taken raw orally in gastrointestinal disorders | N 0.034 |
| **Hydrocotyle himalaica** P.K.Mukh. [Araliaceae]; **MT-1830** | Kiling-kiipum | HA | Wh | Fh: Paste mixed in water for stupefying fish | N 0.017 |
| **Hydrocotyle javanica** Thumb.[Araliaceae]; **MT-1712** | Nanor-tangto | HA | Wh | Fh: Paste mixed in water for stupefying fish | N 0.017 |
| **Impatient braecreatula** Hook.f. [Balsaminaceae]; **MT-1735** | Eengin-taari | HG | Sh, Tu | F: Tender shoots serve as a vegetable | N 0.017 |
| **Ipomoea batatas** (L.) Lam. [Convolvulaceae]; **MT-1644** | Pangkang takeng | HP | Rh | F: Both served as a vegetable | N 0.017 |
| **Kaempferia galangal.** [Zingiberaceae]; **MT-3111** | Ronjlab | CH | Fr | F: Cooked as a vegetable | N 0.017 |
| **Lablab purpureu** | Eepum / eejiuk/giri | CH | Fr | F: Cooked as a vegetable; HHM: Shell of matured dried fruits used as vessels; names and uses of vessels depend on the shape and are named as AsiGiri (water bottle): Eejiuk for spoon-shaped and Eepum for urn shape meant for different purposes | E 0.034 |
| **Laphangium affine** (D.) Tzvelev [Asteraceae]; **MT-1575** | Paaput | HA | Lf | F: Cooked as a vegetable | N 0.017 |
| **Lentilla edeodes** (Berk.) Pegler [Marasmiaceae]; **MT-1721** | Lolum | FB | FB | F: Cooked and eaten | - 0.17 |
| **Leucocephrum canum** Sm. [Lamiaceae]; **MT-1545** | Toti | S | St | RBC: Believes, when the soul moves out from the human body by accident, in such cases, they perform rituals (Leyok Goknam) in which the twig of the plant is used that acts as a pathway for the soul to come back to the sufferer | N 0.017 |
| **Lindenbergia hookeri** C.B.Clark ex Hook.f. [Plantaginaceae]; **MT-1522** | - | S | Fl | F: Edible, sour | N 0.017 |
| **Litsea cubeba** (Lour.) Pers. [Lauraceae]; **MT-1777** | Rayil, tayir | T | Fr | F: As a condiment, strongly aromatic | N 0.017 |
| **Livistona jenkinsiana** Griff. [Areaceae]; **MT-1520** | Taek | T | Lf, Fr | F: Tender leaves and fermented fruits edible; C: Leaves widely used for thatching houses | N 0.034 |
| **Macaranga cuspidata** Boivin ex Baill. [Euphorbiaceae]; **MT-1521** | Lagar | T | Fr | H: As bait for birds and rodents | E 0.017 |
| **Macularia cochinchnensis** (Lour.) Corner [Moraceae]; **MT-1808** | Tanyum-tang | S | Fr | F: Ripe ones eaten, sweet | N 0.017 |
| **Maesa indica** (Roxb.) A.DC. [Primulaceae]; **MT-1654** | Eijun-jayun | S | Fr, Ts | F: Ripe fruits and tender shoots eaten raw | N 0.017 |
| **Mangifera sylvestra** Roxb. [Anacardiaceae]; **MT-1686** | Hidum-tagung | T | Fr | F: Ripe ones edible, sour | N 0.017 |
| **Manihot esculenta** Crantz. [Euphorbiaceae]; **MT-1598** | Singyo engin/gising ening | S | Ts, Rs | F: Tender shoot as vegetable and tuberous root used for local wine (Nokyn) | E 0.017 |
| **Melastoma malabathricum** L. [Melastomataceae]; **MT-1709** | Kasii rai | SF | Fr, Fl | F: Fruits ate raw; RBC: blooming initiation indicates the time for broadcasting of paddy seeds | N 0.034 |
| **Melinthria trilobata** Cogn. [Cucurbitaceae]; **MT-1635** | Dongkong kayong | CH | Fr, Tu | F: Ripe fruits eaten raw; M: tuber ate raw in gastrointestinal disorders | E 0.034 |
| **Microtropis discolor** (Wall.) Arn. [Celastraceae]; **MT-1827** | - | T | Sd | H: Red seed used as bait for rodents | E 0.017 |
| **Mikania micrantha** Kunth [Asteraceae]; **MT-1642** | Eeli | CS | Lf | M: Taken orally to cure stomachache and dysentery | E 0.017 |
| **Molineria capitulata** (Lour.) Herb. [Curculigo capitulata (Lour.) Kutze], [Hypoxidaceae]; **MT-1548** | Tayek | HP | Vn | O: Leaf veins used as thread to stitch the scrotum of piglets after castration | N 0.017 |
| **Molineria praemiana** Deb [Curculigo praemiana (Deb) Bennet & Raizada] [Hypoxidaceae]; **MT-1815** | Tayek | PH | Vn | O: Leaf veins used as thread to stitch the scrotum of piglets after castration | N 0.017 |
| **Morus alba L.** [Moraceae]; **MT-1789** | Nini-guti | T | Fr | F: Ripe ones sweet, edible | E 0.017 |
| **Morus macrooua** Miq. [Moraceae]; **MT-1647** | Eeyum | T | Lx | M: Applied on burns and inflammation of the skin | N 0.017 |
| Scientific Name                        | Common Name  | Part Used | Uses                                                                 |
|---------------------------------------|--------------|-----------|----------------------------------------------------------------------|
| **Persicaria chinensis**               | Dunji        | HP, Wh    | RBC: Believed that if a woman roams near or cuts the plant, her stomach will ache. |
| **Musa aurantiaca**                   | Hodo/golgi   | HA, Fl    | RBC: Initiation of its flowering signifies the time for broadcasting paddy seeds. Plants growing along the field borders for demarcation. |
| **Musa balbisiana**                   | Ludam/kolung | HP, In, Lf| F: Spadix cooked as a vegetable; HHM: Leaf sheaths split narrowly and dried to prepare mats; O: powdery substance collected from the abaxial surface of the lamina is used to reduce friction in a traditional loom. |
| **Musa sanguinea**                    | Paksum       | HP, In    | F: Young spadix cooked as a vegetable                                        |
| **Oryza sativa**                       | Haadli       | HA, Lf    | O: Ground leaf is mixed with salt and then used to kill leeches. |
| **Ocimum basilicum**                   | Take-mare    | HA, Lf    | Mst: Dried leaves produce tobacco; M: salt is added on leaf paste and then applied on infected wounds of cattle. |
| **Oenanthe javanica** (Blume) DC. [Apiaceae]; **Oenanthe roxburghii** Hook. f. [Rubiaceae]; **Myrica esculenta** [Rubiaceae]; **Mussaenda roxburghii** Hook. f. [Rubiaceae]; **Myrica esculenta** [Rubiaceae]; **Mussaenda glabra** Vahl [Rubiaceae]; **Mussaenda hirsuta** [Rubiaceae]; **Nasturtium officinale** R.Br. [Brassicaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypochondriacus** L. [Chenopodiaceae]; **Amaranthus hypoch
**Phylostachys manii** Gamble [Poaceae]; *MT-1585*

- **Tabo** B Cm
- **HHM:** Making walking sticks (**Banggen**): traditional too

**Pilea insolens** Wedd. [Urticaceae]; *MT-15702*

- **Jojing belang** HA Fr
- **F:** Ripe ones eaten raw
- **E:** 0.017
- **Perillaocymoides** fermentation

**Pilea umbrosa** Blume [Urticaceae]; *MT-1749*

- **Oko-robo** HA Ts
- **F:** Cooked as a vegetable
- **E:** 0.017

**Piper betleoides** C.D.C. [Piperaceae]; *MT-1780*

- **Pop teng** CS Lf
- **Mst:** Chewed as a masticator
- **N:** 0.017

**Piper nigrum** L. [Piperaceae]; *MT-1781*

- **Rori** CS Lf
- **F:** Cooked as a vegetable
- **N:** 0.017

**Plantago asiatica** subsp. **Erosa** (Wall.) Z. Yu Li [Plantaginaceae]; *MT-1637*

- **Donsi-borkor** HA Lf
- **F:** Ciiked as vegetable
- **N:** 0.017

**Pleurotus eous** (Berk.) Sacc. [Polyporaceae]; *MT-1698*

- **Inyik** FB FB
- **F:** Cooked to eat
- **E:** 0.017

**Pleurotus ostreatus** (Jacq.) P. Kumm [Polyporaceae]; *MT-1699*

- **Inyik** FB FB
- **F:** Cooked to eat
- **E:** 0.017

**Pleurotus sajor-caju** (Fr.) Fr. [Polyporaceae]; *MT-1784*

- **Lengot** FB FB
- **F:** Cooked to eat
- **E:** 0.017

**Poikilospermum suaveolens** (Blume) Merr. [Urticaceae]; *MT-1744*

- **Ogik** S Ts
- **F:** Cooked as vegetable
- **N:** 0.017

**Polygonum molle** D. Don [Polygonaceae]; *MT-1710*

- **Kiibu-namang** S Ts
- **F:** Eaten raw, sour
- **N:** 0.017

**Portulaca olgeracea** L. [Portulacaceae]; *MT-1682*

- **Gubor-oying** HA Wh
- **F:** Cooked as a vegetable
- **E:** 0.017

**Pothos scandens** L. [Araceae]; *MT-1722*

- **Lomang-losset** E Lf
- **M:** Paste applied to treat bone fractures; **RBC:** if the patient dreams it, then the fracture will heal quickly
- **N:** 0.034

**Pouzolzia sanguinea** (Blume) Merr. [Urticaceae]; *MT-1754*

- **Ozik** Sf Ts
- **F:** Edible as vegetable
- **E:** 0.017

**Prunus persica** (L.) Batsch [Rosaceae]; *MT-1719*

- **Kombong** T Fl
- **RBC:** Its blooming indicates the arrival of **Kombong Poolo** month when the **Unying Aran** festival is celebrated
- **E:** 0.017

**Psidium guajava** L. [Myrtaceae]; *MT-1732*

- **Mudurang** T Fr, Ts
- **F:** Tender shoots eaten raw to cure gastrointestinal disorders
- **E:** 0.034

**Pteridium aquilinum** (L.) Kuhn [Pteridaceae]; *MT-1725*

- **Losup** HP Fn
- **F:** Young fronds cooked as a vegetable
- **E:** 0.017

**Pteris quadriaurita** Retz. [Pteridaceae]; *MT-1607*

- **Rukji** HP Fn
- **RBC:** Beliefs, if a newly hatched chick’s basket (**Petir**) is covered with its fronds, then chicks will grow into red cocks
- **N:** 0.017

**Pteris tripartita** Sw. [Pteridaceae]; *MT-1606*

- **Rukji** HP Fn
- **F:** Young fronds as vegetable
- **N:** 0.017

**Pterispermum acerifolium** (L.) Willd. [Malvaceae]; *MT-1691*

- **Hipop** T Lf, Br
- **O:** For packing finger millets; bark for dyeing cotton threads
- **N:** 0.017

**Pueraria montana** (Lour.) Merr. [Fabaceae]; *MT-1775*

- **Riiadin** L Rs, St
- **F:** Root-tuber (**Watery**) eaten raw; M: fibers from stem bark applied on cuts and wounds; **RBC:** this fiber is used in almost every ritual of the **Tani** clan and are tied on their hand (on the right hand for the married and left hand for unmarried) which is believed to be protective
- **N:** 0.051

**Rhaphidophora decursiva** (Roxb.) Schott [Araceae]; *MT-1571*

- **Talo** E Lf
- **RBC:** Leaf twig is used to perform rituals after the bear hunt for the departed soul to leave peacefully
- **N:** 0.017

**Rhaphidophora hookeri** Schott [Araceae]; *MT-1572*

- **Talo** E Lf
- **RBC:** Used to perform rituals after the bear hunt for departed souls to leave peacefully
- **N:** 0.017
| Scientific Name | Common Name | Part Used | Uses |
|-----------------|-------------|-----------|------|
| *Rhus chinensis* Mill. [Anacardiaceae]; MT-1580 | Tagmo | T, Fr | M: Cooked with wild mushroom to avoid food poisoning |
| *Rhynchochtem ellipticum* (Wall. ex D.Dietr.) A.DC. [Gesneriaceae]; MT-1705 | Jongkot | S, Lf | Mst: Young leaves chewed as a substitute for betel leaves |
| *Rhynchochtem parviflorum* Blume [Gesneriaceae]; MT-1814 | Jongkot | S, Lf | Mst: Young leaves chewed as a substitute for betel leaves |
| *Rhynchochem vestitum* Wall. ex C.B. Clarke [Gesneriaceae]; MT-1706 | Jongkot | S, Fr | F: Fruits eaten raw; leaves fermented with soya bean and both are eaten |
| *Ricinus communis* L. [Euphorbiaceae]; MT-1678 | Gopo-golo | S, Lf | M: Leaf is warmed on fire and placed on paining joint, muscle, and sprain: bark of petiole also used as a bandage to cure fractured bone of chick |
| *Ronaboa emetica* (L.f) A.Rich.[Rubiacaeae]; MT-1728 | Margihop | S, Fr | F: Ripe ones edible, sweet |
| *Rorippa dubia* (Pers.) H.Hara [Brassicaceae]; MT-1753 | Orgyam | HA, Lf | F: Cooked as a vegetable |
| *Rubus alcefolius* Poir. [Rosaceae]; MT-1763 | Pasi-payi | S, Fr | F: Ripe ones eaten raw, sweet |
| *Rubus ellipticus* Sm. [Rosaceae]; MT-1759 | Pukkom-tayin | S, Fr | F: Ripe oned eaten raw, sweet |
| *Rubus niveus* Thumb. [Rosaceae]; MT-1542 | Yokpo-pokung | CS, Fr | F: Ripe oned eaten raw, sweet |
| *Rubus paniculatus* Sm. [Rosaceae]; MT-1569 | Tangkin | CS, Fr | F: Ripe oned eaten raw, sweet |
| *Rubus rosifolius* Sm. [Rosaceae]; MT-1831 | Tangkin | S, Fr | F: Ripe oned eaten raw |
| *Rubus steboldii* Blume [R. moluccanus L.], [Rosaceae]; MT-1567 | Tapa-tara | S, Fr, Lf | F: Ripe fruits eaten raw, sweet: leaves as a substitute for *Piper betel* leaves |
| *Rubus sumatranus* Miq. [Rosaceae]; MT-1713 | Kinbu-Buru | CS, Fr | F: Ripe ones edible, sweet |
| *Rumex maritimus* L. [Polygonaceae]; MT-1750 | Okung | HA, Lf | F: Young leaves as a vegetable |
| *Saccharum arundinaceum* Retz. [Poaceae]; MT-1566 | Tapii | HP, Wh | RBC: Believed that it is the elder brother of *Carex* sp. and the whole plant of both species are used in rituals performing during the funeral |
| *Saccharum spontaneum* L. [Poaceae]; MT-1782 | Piko-pimur/aasi-pimur | HP, In | F: Roasted young inflorescence edible |
| *Saurauia armata* Kurtz [Actinidiaceae]; MT-1619 | Anpum | T, Fr | F: Eaten raw, sweet |
| *Saurauia griffithii* Dyer [Actinidiaceae]; MT-1829 | Taan | T, Fr | F: Ripe ones eaten raw |
| *Saurauia nepaulensis* DC. [Actinidiaceae]; MT-1590 | Taan | T, Fr, Tw | F: Ripe fruits eaten raw; RBC: Twigs are used in auspicious occasions, animal sacrifices, and rituals related to prosperity |
| *Saurauia panduanawall* Wall. [Actinidiaceae]; MT-1589 | Taan | T, Fr, Tw | F: Ripe fruits eaten raw, sweet; RBC: Twigs are used in auspicious occasions, animal sacrifices, and rituals related to prosperity |
| *Saurauia sinohirsata* J.Q.Li & Socjarto [Actinidiaceae]; MT-1819 | Anpum | S, Fr | F: Ripe ones, sweet, taken raw |
| *Saururus androgynos* (L.) Merr. [Phlylantlhoeaceae]; MT-1676 | Gan-ying | S, Lf | F: Cooked as a vegetable |
| *Schizostachyum per gracile* (Munro) R.B.Majumdar [Poaceae]; MT-1835 | Mudung | B, Cm | HMM: Small fiber (*Epong*) made from the stem used for house roofing to tie thatching materials |
| *Setaria italica* (L.) P.Beauv. [Poaceae]; MT-1621 | Ayak | HA, Sd | F: Used with the fermentation of rice (*Nokyin*) and for country liquor (*Yaka Apong*); M: Fermented grains directly applied on burnt skin |
| *Solanum aethiopicum* L. [Solanaceae]; MT-1727 | Latsaying | HA, Fr | F: Young fruits as vegetable |
| *Solanum erianthum* D.Don [Solanaceae]; MT-1768 | Pepu sensu | S, Lf | O: Leaves used for packing bananas for quick ripening and protection from damage |
| Name                                              | Code    | Part(s) | Properties                                                                                     | Purity |
|---------------------------------------------------|---------|---------|-----------------------------------------------------------------------------------------------|--------|
| *Solanum nigrum* L. [Solanaceae]; *MT-1748*       | Okomang | HA, Ts  | F: Tender shoots as a vegetable                                                               | E      |
| *Solanum spirale* Roxb. [Solanaceae]; *MT-1527*   | Bangko  | S, Lf, Sd | F: Leaves as a vegetable; M: cooked leaves for gastrointestinal disorder and hypertension; dried fruits are taken orally in helminthiasis; warmed leaves applied on bruises | N      |
| *Solanum torvum* Sw. [Solanaceae]; *MT-1526*      | Koda/migom | S, Fr  | F: Young ones, bitter, cooked as chutney                                                       | E      |
| *Solanum viarum* Dunal [Solanaceae]; *MT-1525*    | Peel-taang | HA, Fr  | M: Warned on fire and then applied on infected teeth                                            | E      |
| *Solanum villosum* (L.) Willd. [Solanaceae]; *MT-1524* | Okomang | HA, Ts  | F: Tender shoots as a vegetable                                                               | N      |
| *Solanum violaceum* Ortega [Solanaceae]; *MT-1523* | Kopi piitm | S, Fr  | F: Young fruits cooked as chutney; M: raw fruits taken orally to remove intestinal worms        | N      |
| *Spondias pinnata* (L.f.) Kurz [Anacardiaceae]; *MT-1530* | Dorgu-dorge | T, Fr  | F: Eaten raw, sour                                                                            | N      |
| *Stapletonia seshagiriana* (R.B.Majumdar) H.B.Naithani [Schizostachyum seshagiriana R.B. Majumdar, [Poaceae]; *MT-1584* | Tabum | B, Cm  | HHM: Use as rope and in handicrafts                                                            | N      |
| *Stellaria media* (L.) Vill. [Caryophyllaceae]; *MT-1694* | Hosir oying | HA, Wh  | F: Cooked as a vegetable                                                                       | N      |
| *Stenochlaena palustris* (Burm.f.) Bedd. [Blechnaceae]; *MT-1604* | Rukyo | HP, Fn  | RBC: Fronds inserted in the stomach of a sacrificed pig                                       | N      |
| *Sterculia lanceolata var. coccinea* (Jack) Phengklai [Malvaceae]; *MT-1549* | Tayam | T, Sd, Fr | F: Immature seeds eaten raw and mature ones roasted; RBC: open ripe fruit is hung on the door to scare the evil spirits | E      |
| *Sterculia striatiflora* Mast. [Malvaceae]; *MT-1786* | Tayam | S, Sd, Fr | F: Immature seeds eaten raw and mature ones roasted; RBC: open ripe fruit is hung on the door to scare the evil spirits | N      |
| *Stixis suaveolens* (Roxb.) Pierre [Capparaceae]; *MT-1613* | Rokpo ketum-kelum | L, Fr  | F: Ripe ones taken raw, sweet                                                                  | E      |
| *Syzygium cumini* (L.) Skeels [Myrtaceae]; *MT-1703* | Jongkeng | T, Fr  | F: Ripe ones taken raw, sweet                                                                  | N      |
| *Syzygium formosum* Wall. [Mast. Myrtaceae]; *MT-1826* | Ponkan | T, Fr  | F: Ripe ones eaten raw                                                                         | N      |
| *Syzygium fragilis* DC. [Myrtaceae]; *MT-1828*     | Jongkeng | T, Fr  | F: Ripe ones eaten raw                                                                         | N      |
| *Theleptis parasitica* (L.) Tardieu [Thelepteridaceae]; *MT-1608* | Rukji | HP, Fn  | O: During broody nesting, the basket is covered with its dried fronds to kill poultry lice      | N      |
| *Themeda villosa* (Lam.) A.Camas [Poaceae]; *MT-1820* | Tase | HP, Lf  | C: Used in thatching                                                                           | N      |
| *Theladiantha cordifolia* (Blume) Cong. [Cucurbitaceae]; *MT-1738* | Nyomrang-payin | CH, Ts | F: Consumed as vegetable                                                                       | N      |
| *Thysanolaena latifolia* (Roxb. ex Hornem.) Honda [Poaceae]; *MT-1708* | Kanggam | HG, In  | HHM: Maturedones used as a soft broom                                                           | N      |
| *Toddalia asiatica* (L.) Lam. [Rutaceae]; *MT-1675* | Gaming tatkeng | CS, Tw | RBC: Used in rituals after hunting to deliver peace to the soul of the hunted                  | N      |
| *Toxicodendron hookeri* (K.C. Sahni & Bahadur) C.Y. Wu & T.L. Ming [Anacardiaceae]; *MT-1626* | Bemo | T, Wh  | RBC: Beliefs, if any harm is done to the plant, then it will curse them with bad health and skin infection | N      |
| *Trevesia palma* (Roxb. ex Lindl.) Vis. [Araliaceae]; *MT-1679* | Bunlo | T, Ts  | F: Served as vegetable                                                                          | N      |
| *Urtica ardens* Link [Urticaceae]; *MT-1701*       | Gorpak | T, Fr  | F: Young ones bitter and cooked as chutney                                                      | N      |
| *Urtica dioica* L. [Urticaceae]; *MT-1729*         | Jinang | S, Lf  | M: Half burnt leaves are taken orally in allergy                                               | N      |
| *Vigna unguiculata* (L.) Walp.[Fabaceae]; *MT-1612* | Rondong | CH, Fr  | M: Infected wounds of *Bos frontalis* is beaten with nettle leaf to kill the infectious organisms | N      |
| *Viola betonicifolia* Sm. [Violaceae]; *MT-1540*   | Jortung/japjor | HP, Wh  | F: Cooked as a vegetable                                                                       | N      |
| *Viola pilosa* Blume [Violaceae]; *MT-1539*        | Jorging/japjor | HP, Wh  | F: Cooked as a vegetable                                                                       | N      |
| Plant                          | Cod. | Part | Uses                                                                 | P-value |
|-------------------------------|------|------|----------------------------------------------------------------------|---------|
| *Wallichia oblongifolia* Griff. [Arecaaceae]; *MT-1538* | Lepa | P    | RBC: The hunted deer (*Hidum*) is packed with its leaves in the local bag (*Tali*) so that deer’s departed soul can’t harm the hunter | N 0.017 |
| *Wallichia triandra* (J.Joseph) S.K.Basu [Arecaaceae]; *MT-1537* | Taleng | P    | RBC: Same as for *Wallichia oblongifolia* | N 0.017 |
| *Youngia japonica* (L.) DC. [Asteraceae]; *MT-1536* | Rungdum | HA   | Mst: Dried leaves as a substitute for tobacco | N 0.017 |
| *Zanthoxylum armatum* DC. [Rutaceae]; *MT-1535* | Ombeng | S    | F: Fruits and leaves as a spice; M: twigs as toothbrush during toothache | N 0.034 |
| *Zanthoxylum oxyphyllum* Edgew. [Rutaceae]; *MT-1534* | Onger | L    | F: Leaves as a condiment; Fh: Bark paste for fish stupefaction | N 0.034 |
| *Zanthoxylum rhesa* (Roxb.) DC. [Rutaceae]; *MT-1533* | Onger | T    | F: Leaves as a condiment; Fh: Bark paste for fish stupefaction | N 0.034 |
| *Zingiber officinale* Roscoe [Zingiberaceae]; *MT-1532* | Takeng | HG   | F: Most common condiment; M: warmed rhizome paste applied on infected wounds for fast healing | N 0.034 |
| *Zingiber sianginensis* Tatum & A.K. Das [Zingiberaceae]; *MT-1531* | Ke-kiir | HG   | F: Common condiment; M: In cough, stomachache, and vomiting raw rhizome orally; RBC: rhizome paste applied on the body to keep away the evil spirits and snakes by its aroma while in the jungle | N 0.051 |