

SHORT COMMUNICATION

Ethnobotanical study of native edible and medicinal plants in Kyrdemkulai, Meghalaya

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ABSTRACT

Neglected underutilized crops can be called the 'future food', especially as the impact of climate change intensifies and drastically affects the global food production system. These crops, which are adapted to local conditions and have lower water and input requirements, offer a sustainable alternative to conventional crops. However, neglecting these crops is leading to a subsequent loss of traditional knowledge regarding their consumption and utilization. Additionally, the preference of local consumers and farmers is shifting towards high-yielding improved varieties, resulting in a loss of biodiversity. Meghalaya, in particular, is endowed with a rich biodiversity of horticultural crops, including indigenous wild crops. Preserving and promoting these underutilized crops is essential for maintaining biodiversity, supporting local economies, and ensuring food security in the face of climate change. A survey-based study focused on the Kyrdemkulai area of the Ri-Bhoi district of Meghalaya identified 63 native edible and medicinal plants, belonging to 33 families, with Euphorbiaceae, Fagaceae, Musaceae, and Zingiberaceae being the most represented. The most commonly used native plants in the area are *Castanopsis purpurella*, *Emblica officinalis*, *Myrica esculenta*, *Baccaurea sapida*, *Rhus chinensis*, *Calamus erectus*, *Elaeagnus pyriformis*, *Morus australis*, *Averrhoa carambola*, *Artocarpus chaplasi*, *Musa* spp., *Citrus grandis*, *C. esculenta*, *Dendrocalamus hamiltonii*, *Sechium edule* *Allium* spp., *Centella asiatica*, *Begonia roxburghii*, *Hibiscus sabdariffa*, *Kaempferia galanga* and *Phlogacanthus thyrsoiflorus*. Most wild edible plants are trees, followed by herbs, shrubs, and climbers. Maximum of these plants are densely wild, then, sparsely wild, and very few are under cultivation. The lack of awareness, processing, and storage facilities hinders these wild species' wider adoption and utilization. Developing value added products of wild edible plants is essential for their acceptance among the consumers. Promoting cultivation of these crops into the existing farming system is crucial for increasing crop diversity and ecosystem balance.

Keywords: Biodiversity conservation, ethnobotany, native edible plants, utilization

India is home to approximately 800 different species of underutilized edible crops. Among these, around 300 species are predominantly used by the tribal and rural populations in the Northeastern region alone (Amrutha *et al.*, 2024). A total of 151 species (49 families and 86 genera) wild edible fruits used by the Khasi tribes of Meghalaya have been recorded (Jeeva, 2009). Most common and potential underutilized edible fruit genetic resources occurring naturally in Meghalaya and NE region have been recorded by scientists and researchers (Rymbai *et al.*, 2015; Kharshandi *et al.*, 2015; Momin *et al.*, 2016; Devi *et al.*, 2018ab; Devi *et al.*, 2022). These species offer notable nutritional, medicinal, and ecological value. For example, *Prunus nepalensis* provides cardiovascular benefits and is traditionally used in foods and beverages (Kuna *et al.*, 2019; Rymbai *et al.*, 2023). *Prunus salicina* fruits offer natural edible color and essential nutrients (Rymbai *et al.*, 2016). *Myrica esculenta* (Sohphie)

supports the treatment of various ailments with its astringent properties (Rymbai *et al.*, 2023). *Docynia indica* (Sohphoh) addresses obesity and digestive issues with its hypoglycemic and antibacterial properties (Rymbai *et al.*, 2023; Deka and Rymbai, 2014). *Flemingia vestita* (Sohphlang), a unique tuber crop, has anthelmintic properties (Talang *et al.*, 2019). Additionally, crops like *Sechium edule* and *Colocasia esculenta*, which are consumed as vegetable, are rich in dietary fiber, vitamins, and minerals, contributing to improved digestion and overall health (Amrutha *et al.*, 2024; Momin *et al.*, 2016). Leafy greens like *Centella asiatica* are recognized for their medicinal properties, promoting cognitive health and wound healing (Amrutha *et al.*, 2024). Medicinal plants such as *Kaempferia galanga* and *Hibiscus sabdariffa* play a pivotal role in traditional healthcare systems (Rymbai *et al.*, 2023; Sarkar *et al.*, 2023). Other valuable species include *Elaeagnus latifolia*, *Haematocarpus validus*, *Baccaurea sapida*, and *Pyrus pashia*, which offer diverse health benefits and support sustainable agriculture and biodiversity conservation in the region (Hazarika *et al.*, 2015; Rymbai *et al.*, 2019ab). Despite their nutritional and ecological advantages, these crops remain largely neglected in mainstream agriculture and markets. The natural diversity of these wild edible plants is under threat in this vulnerable area. Year after year due to forest fires, demand for land for the increasing population, jhum cultivation, forest products and fuel wood collection, the natural forests are being rapidly destroyed. Unprecedented and unscientific collection of wild plants is making the pressure on these species more aggravated. This is narrowing the genetic diversity of wild species. As of now, the genetic resources of such fruits are facing a great threat of extinction due to climate change, large-scale urbanization, changing attitude and taste of peoples and developmental projects. Therefore, there is an

urgent need for conservation and protection of these rich and diverse wild edible fruits before they are completely destroyed and becomes totally extinct from the area (Mozhui *et al.*, 2011). Recognizing their potential and the urgent need for conservation, this study was conducted to identify native edible and medicinal plants in the natural ecosystem of the Kyrdemkulai area of Ri-Bhoi district, Meghalaya.

A village and forest survey was carried out to identify edible wild plants in the region. The study was conducted at the mild tropical mid-hill ecosystem area of Kyrdemkulai, Umsning Block, Ri-Bhoi District, Meghalaya, during 2021-22. The area lies between E 91°77'30" to E 92°27'00" Longitude and N 25°63'00" to N 26°07'00" Latitude, and at a maximum elevation of 1,242 meters above sea level. Information were gathered by filling questionnaire and personal interviews with the village elders and traditional healers residing in various areas (Jain and Goel, 1995), which were identified with the help of village administrators and community leaders. To gather more information, weekly market at Umsning was also visited and interviewed. The fruits and flora were identified according to existing records and literatures to validate all information (Rymbai *et al.*, 2016). Information related to the native edible and medicinal plants, like local name, family, habits, habitat, utilities, etc., is presented in Table 1.

From the survey conducted, a total of 63 native edible and medicinal plants were reported from the natural ecosystem of the Kyrdemkulai area of Ri-Bhoi district, Meghalaya. Among these, the most commonly used native plants as per the frequency of citation or mention (Faruque *et al.*, 2018) are *Castanopsis purpurella* (98%), *Embllica officinalis* (95 %), *Myrica esculenta* (95 %), *Baccaurea sapida* (70 %), *Rhus chinensis* (80%), *Calamus erectus* (68%), *Elaeagnus pyriformis* (80 %), *Morus australis* (75 %), *Averrhoa carambola* (90 %), *Artocarpus*

chaplasi (97%), *Musa* spp. (100%), *Citrus grandis* (96%), *Colocasia esculenta* (98%), *Dendrocalamus hamiltonii* (94 %), *Sechium edule* (95%), *Allium* spp. (80 %), *Centella asiatica* (80%), *Begonia roxburghii* (74 %), *Hibiscus sabdariffa* (85%), *Kaempferia galanga* (78 %) and *Phlogacanthus thyrsoiflorus* (70 %). These edible species are being mentioned in findings by different researcher in similar geographical location (Rymbai et al., 2015; Kharshandi et al., 2015; Momin et al., 2016; Amrutha et al., 2024), which indicates the similarity in preference pattern and overexploitation of some wild species, if not cultivated in the farmsteads. The identified native plants belonged to 33 family, majority of which belonged Euphorbiaceae (5), Fagaceae, Musaceae, Zingiberaceae (4 each), and Rosaceae, Rutaceae, Solanaceae, Araceae (3 each). Devi et al. (2022) have reported four fagaceous species in Kyrdekulai area, while Rutaceae family was reported highest in Garo hills (Momin et al., 2016). With respect to habit-wise distribution of plants, depicts that the number of wild edible tree species was significantly high (30) and it was followed by herbs (17), shrubs (13) and climbers (3). Previous records also showed more numbers of wild edible tree species compared to other forms of growth habits (Kharshandiet al., 2015). Adapting a higher diversity of tree species is relevant to the mild tropical mid-hill condition of the region. The natural frequency of the tree species may suggest a natural multi-tier planting system following the photoperiod requirement of different species. The study reveals 37 % of the species were densely wild and 14 % sparsely wild, which are found growing in the forest area, open areas, river-side and as forest undergrowth. It was observed that out of total wild edible species, 25% are under cultivation. Similar information was also given by Momin et al. (2016), who reported fewer adoption and cultivations of wild species in farmsteads. Local farmers do not

opt to cultivate these native species due to lack of market demand which is because of shift of food preference with the improved and cultivated species, occupying majority of the farmlands, even in these hill areas. Moreover, majority of these edible and medicinal native plants are tree species, which occupies larger area for cultivation. But, majority of the farmers have small landholdings and hence cultivate only the herb, shrub or small trees. On the contrary of cultivation, farmers due to ignorance, are cutting down the native trees to make cultivable lands. This has caused an imbalance in the natural ecosystem, and only a few hardy agro-silvicultural species, like *Schima wallichii*, *Castanopsis* spp., etc., are found to dominate the population in the region, threatening the natural diversity of other species. Hence, proper planning needs to be carried out to bring a natural balance in agroecology through crop diversification using native species into the region's farming system. The consumption pattern was found to be almost similar to previous records (Rymbai et al., 2016; Momin et al., 2016; Kharshandi et al., 2015). Ripe fruits are mostly eaten raw whereas unripe fruits are used variedly and cooked as vegetable, mixed with curry, eaten with salt or cooked with dry fish. Fruits like *Baccaurea sapida*, *Castanopsis* spp., *Dillenia indica*, *Elaeagnus latifolia*, *Artocarpus chaplasi*, *Averrhoa carambola* etc., are consumed raw (Deka & Rymbai, 2014); *Dendrocalamus hamiltonii*, *Momordica dioica*, *Sechium edule*, *Solanum* spp., *Begonia roxburghii*, etc. are cooked as vegetable. The species *Myrica esculenta* is extensively used for preparing sauce (Rymbai, 2023) and help to generate extra income among the indigenous women. Fruits of *Baccaurea sapida*, *Musa* spp., *Artocarpus chaplasi*, *Citrus* spp., *Docynia indica*, *Myrica esculenta*, and leafy vegetables such as *Centella asiatica* and *Houttuynia cordata* are sold in the local market at a large scale. One of the regions of being unable to

popularise these wild species is due to lack of awareness, processing and storage facilities, in the region. Although processing is carried out at a small scale for family or local consumption, intensive and large scale with systematic standardisation of post-harvest processing and development of primary or secondary products need to be developed for wider acceptability and utility in various industries like food processing, nutraceutical, cosmetic and pharmaceutical industries (Amrutha *et al.*, 2024).

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Table1:List of native edible and medicinal plants in the mild tropical mid-hill natural ecosystem of Meghalaya

Sl. No.	Scientific name	Family	Local name	Season	Parts used	Habit	Density/Habitat	Local Uses
1	<i>Emblia officinalis</i> Gaertn.	Euphorbiaceae	Soh-Mylleng	Oct-Mar	Fruit	Tree	Dense, grown wild in the forest	Fruit is one of the richest sources of vitamin C. Locally consumed raw and processed.
2	<i>Castanopsis tribuloides</i> (Sm.) A. DC.	Fagaceae	Soh-ot-rit	Sept-Dec	Fruit	Tree	Dense, grown wild in the forest	Locally consumed fresh or roasted
3	<i>Castanopsis indica</i> (Roxb. ex Lindl.) A. DC.	Fagaceae	Soh-ot-langkraw	Dec-Feb	Fruit	Tree	Dense, grown wild in the forest	Locally consumed fresh or roasted
4	<i>Castanopsis purpurella</i> (Mq.) Balak.	Fagaceae	Soh-ot-saw	Dec-Feb	Fruit	Tree	Dense, grown wild in the forest	Locally consumed fresh or roasted
5	<i>Lithocarpus fenestratus</i> (Roxb.) Rehder	Fagaceae	Soh-ot-dieam	Aug-Oct	Fruit	Tree	Dense, grown wild in the forest	Edible but left to be consumed by wild animals
6	<i>Elaeocarpus lanceifolius</i> Roxb.	Elaeocarpaceae	Soh-khyllam	Jan-Mar	Fruit	Tree	Sparse, grown wild in the forest	Edible fruits but not popular for consumption among the local in the area.
7	<i>Myrica esculenta</i> Buch.-Ham. ex D. Don	Myricaceae	Soh-phie	April-July	Fruit	Tree	Dense, grown wild in the forest	Ripe fruits eaten raw, used for preparation of juice
8	<i>Myricanagi</i> . Thunb.	Myricaceae	Soh-phie-rit	April-July	Fruit	Tree	Dense, grown wild in the forest	Same as Soh-phie
9	<i>Passiflora edulis</i> Sim.	Passifloraceae	Soh-brap	Nov-Jan	Fruit	Climber	Sparse, domesticated at homesteads and farm	Ripe fruits consumed after minimal processing and also used for making juice, squash.
10	<i>Baccaurea ramiflora</i> Lour.	Euphorbiaceae	Soh-Myndong/ Soh-Ramdieng	April-July	Fruit	Tree	Very sparse, grown wild in the forest	Ripe fruits consumed fresh
11	<i>B. sapida</i> (Roxb.) Mull.Arg.	Euphorbiaceae	Soh-Langkadaw	May-July	Fruit	Tree	Sparse, grown wild in the forest	Light yellow sour edible fruit. Peel pickled and consumed locally.
12	<i>Rhus chinensis</i> Mill.	Anacardiaceae	Soh-Ma	Oct-Jan	Fruit	Tree	Dense, wild	Sub-acidic pulp much relished. The ripe fruit has a sharp acid taste. It is said to be a remedy for colic.
13	<i>Spondias pinnata</i> (Linn.f.) Kurz.	Anacardiaceae	So-Pa-Ir	Mar-Nov	Fruit	Tree	Sparse, wild	Consumed after minimal processing, decoction for digestion.
14	<i>Prunus jenkinsii</i> Hk.f. & Th.	Rosaceae	Soh-Khwai Dienkyrkhang Sa-tanghi(J)	Sept-Nov	Fruit	Tree	Very sparse, wild	Purple Sweet fruit consumed raw and processed
15	<i>Vangueria spinosa</i> (Roxb. Ex Link) Roxb.	Rubiaceae	Soh Matan Soh Mon	April-Sept	Fruit	Tree	Dense, wild	Leaves consumed as vegetable. Fruit eaten raw after dehydrated.
16	<i>Calamus erectus</i> Roxb.	Arecaceae	Soh-trat-heh	Sept-Dec	Fruit	Shrub	Dense, wild	Fruits antioxidant and antidiabetics
17	<i>Elaeagnus latifolia</i> (Linn.)	Elaeocarpaceae	Soh-shang	Nov-May	Fruit	Shrub	Dense, Semi-domesticated	Fruits consumed fresh, and processed into chutney, pickle.
18	<i>Elaeagnus pyriformis</i> Hk.f.	Elaeocarpaceae	Dieng-soh-blur	March-April	Fruit	Shrub	Dense,	Fruits consumed fresh, and processed into chutney,

							Semi-domesticated	pickle.
19	<i>Syzygium tetragonum</i> (Wt.) Kurz. (Dennst) Balak.	Myrtaceae	Soh-Ra-Moh (Wild jamun) Dieng-soh-sarlei	May-June	Fruit	Tree	Very dense And wild	Anthocyanin rich, small sweet, and oblong edible fruit but mostly neglected
20	<i>Sterculia versicolor</i> Wall.	Sterculiaceae	Soh-Um/ Star-um	April-July	Fruit	Tree	Dense, grown wild near river and stream-side	Anthocyanin rich small sweet and oblong edible fruit but mostly neglected
21	<i>Rubus moluccanus</i> Linn	Rosaceae	SohNypbah	Jan-Dec	Aggregate sweet red berry	Herb	Dense, wild undergrowth of forests.	Fruits are edible. Roots are medicinal and are used for diarrhea and dysentery, constipation, gastric, gripe and diabetes.
22	<i>Musa</i> spp.	Musaceae	Kait-Ja	Perennial	Fruit	Herb	Dense Domesticated	Edible fruit sold at local markets
23	<i>Musa</i> spp.	Musaceae	KaitSyiem	Perennial	Fruit	Herb	Dense Semi-Domesticated	Edible fruit sold at local markets. Popular for feeding infants.
24	<i>Musa</i> spp.	Musaceae	Kait Khar	Perennial	Fruit	Herb	Dense Semi-Domesticated	Edible fruit sold at local markets
25	<i>Musa</i> spp.	Musaceae	Kait-Khlong	Perennial	Fruit	Herb	Dense Semi-Domesticated	Edible fruit sold at local markets
26	<i>Sterculia villosa</i> Roxb .	Sterculiaceae	Soh-star/ Dieng star	Nov-Dec	Fruit	Rambl er shrub	Dense, wild	Leaf edible as vegetable sour
27	<i>Citrus grandis</i> (Brum.) Merr.	Rutaceae	Pumelo	Nov-Dec	Fruit	Tree	Wild/cultivated in open areas	Fruit is consumed fresh or seasoned.
28	<i>Morus australis</i> Poir.	Moraceae	Sohlyngdkhur	April-July	Fruit	Tree	Wild/cultivated forest or jhum areas	Ripe fruit is consumed fresh
29	<i>Averrhoa carambola</i> L.	Oxalidaceae	Sohpyrshong	Mar-Oct	Fruit	Tree	Cultivated and semi-wild	Fruit is consumed fresh, seasoned or pickled.
30	<i>Artocarpus chaplasi</i> Roxb.	Moraceae	Dieng-soh-ram	Mar-August	Fruit	Tree	Wild and cultivated	Ripe fruit is consumed fresh, unripe fruit is cooked or pickled
31	<i>Aegle marmelos</i> (Linn.) Correa ex	Rutaceae	Soh-bel	Oct-Mar	Fruit	Tree	Very sparsely cultivated	Ripe fruit eaten fresh
32	<i>Clausena heptaphylla</i> Wight & Arn.	Rutaceae	Dieng-siang-mat	April-July	Fruit	Shrub or small tree	Wild in deep forest near streams	Plant parts possess medicinal properties and are used for traditional healing purpose

33	<i>Dillenia indica</i> Linn.	Dilleniaceae	Soh-kyrbam	June-April	Fruit	Tree	Very sparsely cultivated	Ripe fruit eaten fresh
34	<i>D. pentagyna</i> Roxb.	Dilleniaceae	Dieng-soh-bar	Mar-July	Fruit, leaf, bark	Tree	Open forest area	Plant parts possess medicinal properties and are used for traditional healing purpose
35	<i>Fragaria nilgerrensis</i> Schlecht.	Rosaceae	-	Feb-May	Fruit	Herb	Herb is found as forest undergrowth	Edible fruits but inferior quality so not consumed
36	<i>Garcinia pedunculata</i> Roxb.	Clusiaceae	Dieng-soh-danei	Sept-Feb	Fruit	Tree	Sparsely found in open areas	Fruits edible fresh or processed
37	<i>Mallotus philippensis</i> Muell-Arg.	Euphorbiaceae	Dieng-chandon	Aug-May	Fruit, roots	Shrub or small tree	Densely found under secondary forest	Fruit possesses medicinal properties. Roots are also used for traditional medicine.
38	<i>Tamarindus indica</i> Linn.	Caesalpiniaceae	Dieng-soh-kyntoi	Jan-April	Fruit	Tree	Sparsely grown under open areas	Edible fruit
39	<i>Viburnum foetidum</i> Wall.	Caprifoliaceae	Soh-lang-ksew	July-Sept	Fruit	Shrub	Densely found under forest	Edible fruit consumed processed
40	<i>Z. mauritiana</i> Lam.	Rhamnaceae	Soh-broi	Feb-June	Fruit	Tree	Sparsely found under forest or open areas	Edible fruit consumed processed or seasoned
41	<i>Melastomam alabathricum</i> Linn.	Melastomataceae	Dieng-soh-khingSohsia	Feb-Dec	Fruit, flower, leave	Shrub	Dense, Common in forest and waste lands	Plant parts used for traditional medicine
42	<i>Manihot esculenta</i> Crantz.	Euphorbiaceae	Phandieng	Nov-Mar	Tubers	Shrub	Dense open areas	Edible tubers
43	<i>C. esculenta</i> Schott.	Araceae	Shriew	Nov-Mar	Corms and stem	Herb	Dense wild in forest and also cultivated	Edible corms
44	<i>Eryngium foetidum</i> Linn.	Apiaceae	Dhania-khlaw	May-Feb	Leaves	Herb	Dense, mostly in open places and along streams, also cultivated	Used for garnishing curry
45	<i>Houttuynia cordata</i> Thunb.	Saururaceae	Ja-myrdoh	April-July	Leaves and roots	Herb	Dense, mostly in open places and along streams	Consumed as salad, chutney.
46	<i>Dendrocalamus hamiltonii</i> Nees&Arn. ex Munro	Poaceae	U sohjew	April-Aug	Shoots	Tree	Dense, Wild in forest and also cultivated	Common local delicacies, consumed cooked, fermented, pickled
47	<i>Parkia roxburghii</i> G. Don	Leguminoceae	-	Oct-April	Flower, Seed and whole pod	Tree	Wild in the open areas	Not popular among Khasi locals. However, pods are consumed raw and cooked.

48	<i>Sechium edule</i> (Jacq.) Sw.	Cucurbitacea	Biskot	Oct-Mar	Fruit	Climber	Dense, cultivated in open and forest	Consumed as cooked as a vegetable
49	<i>Momordica dioica</i> Roxb. ex Wild.	Cucurbitacea	Kroi	June-Sept	Fruit	Climber	Cultivated in Jhum fields	Consumed cooked as a vegetable
50	<i>Cinnamomum tamala</i> Nees&Eberm.	Lauraceae	Dieng-la-tyrpad	Perennial	Leaves	Tree	Cultivated	Used as spice
51	<i>Allium</i> spp.	Alliaceae	Jellang	Perennial	Whole herb	Herb	Cultivated at fields	Condiment, consumed as salad or chutney
52	<i>Centella asiatica</i> (Linn.) Urban	Apiaceae	Badmaina	Perennial	Leaves, runners	Herb	Runs wild in forest and open areas	Consumed raw as salad or chutney
53	<i>Solanum barbisetum</i> Nees.	Solanaceae	Soh-podok	Aug-May	Fruit	Shrub	Densely found in the forest peripheries	Used as for medicinal purpose
54	<i>S. indicum</i> Linn.	Solanaceae	Soh-ngan	June-Feb	Fruit	Shrub	Densely found in the forest peripheries	Used as for medicinal purpose
55	<i>S. xanthocarpum</i> Schrad. & Wendl.	Solanaceae	Dieng-soh-podokbakthang	Dec-Feb	Fruit	Herb	Densely found in the forest peripheries	Used as for medicinal purpose
56	<i>Begonia roxburghii</i> A. DC.	Begoniaceae	DiengJajew	July	Leaves	Herb	Tropical and sub-tropical forests	Shoot used as vegetable
57	<i>Hibiscus sabdariffa</i> L.	Malvaceae	Jajew	May-Dec	Leaf, fruit flower	Shrub	Cultivated	Cooked as a vegetable, made into pickles and fruits used for making jam
58	<i>Kaempferia galanga</i> L.	Zingiberaceae	Syngkhumoh	Sept-Nov	Rhizome	Herb	Very Dense wild undergrowth in the forests	Chutney Consume directly for cough, asthma, respiratory and stomach ailments remedy
59	<i>Cucurma angustifolia</i> Roxb.	Zingiberaceae	La Shiang	April-June	Flower	Herb	Very densely available as forest undergrowth	Consumed as vegetable
60	<i>Cheilocostus speciosus</i> (J. Koenig) C. Specht	Zingiberaceae	Syngkhlaw	Oct-Dec	Rhizome	Herb	Densely found in swampy and shaded undergrowth	Edible rhizome, important source of diosgenin
61	<i>Phlogacanthusthysiflorus</i> (Roxb.) Nees	Acanthaceae	Tdongksew Dieng-soh- kajut	Dec-April	Leaf and flower	Shrub	Densely cultivated at homesteads and wild races found in deep forests	Flowers are consumed as vegetables. Decoction for respiratory steam and skin ailments.
62	<i>Hedychium coronarium</i> Koen.	Zingiberaceae	Syngkhlaw	Perennial	Rhizome and flower	Herb	Densely found in swampy areas and streamside in open areas	Flowers and rhizome are consumed as vegetables
63	<i>Caryo taurens</i> Linn.	Arecaceae	Kwai-cha	Jan-April	Seed	Tree	Sparsely found in forest areas	Traditional sources of dietary starch in the past