Original Research Article
EXPOLRATION OF SOME WILD FOOD PLANTS USED BY LOCAL PEOPLE OF KANGCHUP CHINGKHONG, SENAPATI DISTRICT OF MANIPUR

ABSTRACT

The study on "Expolration of some wild food plants of KangchupChingkhong, Senapati district, Manipur" was carried out to document the wild food plants used by the local people of KangchupChingkhong of Senapati District of Manipur. An extensive and intensive field survey was done during March,2022 to April, 2023. A total of 30 wild plant species belonging to 23 genera and 17 families have been reported from the area. Zingiberaceae was the dominant family that represented 9 taxa followed by Fabaceae with 3 taxa while Rubiaceae, Verbenaceae and Asteraceae represent 2 taxa each and other 12 families represent 1 tax each. Trees, Herbs, shrubs and climbers form the habit of these plants. The highest proportion of edible species were herbs, 12 numbers (41%) followed by trees, 10 numbers (31%), shrubs, 5 numbers (17 %), creepers, 2 numbers (7 %) and climber, 1 number (4 %).

Keywords: KangchupChingkhong, Wild food plant, Traditional knowledge, Vegetables

1. INTRODUCTION

The practice of consuming wild food plants is as old as human prehistory. Early humans obtained their food by hunting, fishing and gathering these plants or parts of plants (e.g., stems, roots, flowers, fruits, leaves, buds, and seeds), that were safe for human consumption. Wild foods are also integral to traditional food systems and have nutritional and cultural value for many indigenous peoples [1]. Wild plants play an important role in the livelihoods of local communities of mountain and rural people to meet their nutritional and income sources. Wild plants are richer in minerals compared to cultivated ones, and these plants may satisfy the daily human need for elementary nutrition sources, particularly those of Vitamin C and A, and for some minerals according to WHO regulation [2]. Wild edible plants provide vegetables, fruits, staple food, and spices for indigenous people and are the main source of food. These plants play an important role in the development of new crops through domestication, giving rise to cultivated food plants and strengthening local food security [3]. The nutritional value of traditional leafy vegetables is higher than several conventional vegetables. They also contain antioxidants which offer protection against many chronic diseases like heart disease and the certain type of cancers. The potential of traditional vegetables may help to meet the increasing demands of the growing population [4]. The popularity and use of wild foods have been declining continuously in the modern-day society due to globalization and modern lifestyle. Traditional knowledge and the culture of using wild plant as food and medicine has drastically reduced in current time due to the habit of choosing of easily available domesticated food over the wild food. Besides, to meet the food requirement and food security of the increasing population the practice of domestication of more plant traits has been increasingly increased resulting in the negligence of use of wild plant. These neglected biological resources have, in fact, been shown to contain equally, if not higher amounts, of nutrients than more widely available commercial crops [1]. Therefore,

aim of this study was to explore and documentation of some wild food plants of Kangchup hill area of Senapati District of Manipur.

2. MATERIAL AND METHODS

Study area

KangchupChingkhong is a Village in SaituGamphazol Tehsil in Senapati District of Manipur State, India. It is located 40 KM towards South from District headquarters Senapati. 19 KM from State capital Imphal.KangchupChingkhong is surrounded by Kangpokpi Tehsil towards North, Imphal West II Tehsil towards South, Tamei Tehsil towards North, Saikul Tehsil towards East.

Field survey

An extensive and intensive field survey and collection programmed of indigenous wild food plants was conducted during March 2022 to April 2023 at KangchupChingkhong of Senapati district of Manipur. The data including scientific name, family, local names and parts used were collected through interviews using semi-structured questionnaires and discussions with local knowledgeable persons, local healers, patients, and elderly individuals. Information was obtained from 30 respondent age ranging from 45 to 85 years old (Table 1)

Table 1: Demographic data of the local informants

Age-range	Number of informant falls							
	Patients		Local healers		Elderly individuals		Knowledgeable individuals	
	M	F	M	F	M	F	M	F
45-50	-	-	-	-	-	-	-	-
50-55	-	-	-	-	-	-	-	-
55-60	-	-	3	-	-	-	3	1
60-65	-	-	-	-	2	3	-	2
65-70	-	-	-	1	4	-	1	-
70-75	-	-	-	-	3	1	1	1
75-80	-	-	-	-	1	1	-	-
80-85	-	-	-	-	2	-	-	-
Total	-	-	3	1	12	5	5	4

3. RESULTS AND DISCUSSION

During the present study a total of 30 plant species belonging to 23 genera and 17 families were reported (Table2). Zingiberaceae was the dominant family that represented 9 taxa (30%) followed by Fabaceae with 3 taxa (10%) while Rubiceae, Verbenmaceae and Asteraceae represent 2 taxa each (7%) and other 12 families represent 1 taxa each (3%) (Figure 1). Most of the collected plant species was used as food by the localities of KangchupChingkhong, Senapati District of Manipur. Trees, Herbs, shrubs and woody climbers form the habit of these plants. Herb occupies highest habit (41%) followed by tree (31%), shrub (17%), creepers (7%) and climber (4%) (Figure 2). The highest proportion of edible species were herbs, 12 numbers (41%) followed by trees, 10 numbers (31%), shrubs, 5 numbers (17 %), creepers, 2 numbers (7 %) and climber, 1 number (4 %). Among the parts, leaves were mostly used (27 %), followed by rhizome (22 %), fruits (13 %), shoots and flower (11 % each), bark and whole plants (5 % each) and tuber and stem (3 % each) (Figure 3).

The ethnic practice and indigenous knowledge to consume wild plant as food as well as medicine has been rapidly decreased due to rapid urbanization in the developing countries like India. However, this wild food plant is still now the main source of food and income of indigenous communities residing around the forest. More exploration and documentation work of such high value wild plant is required for future generations. Many of the worker has work on such survey and documentation of wild plant in Manipur. Laishram et. al, 2022 reported 108 plant species belonging to 86 genera and 56 families and Zingiberaceae was the most dominant family with seven species used as WEPs. Herbs were most dominant with 42 species [5]. Rajkumari Supriya Devi and Sanjeet Kumar, 2021 reported 40 wild food consumed by local community along with wild mushrooms. They also observed that most common wild foods are also commonly sold in local markets[6].

Table 2. Wild plants used as foods by localities of KangchupChingkhong, Senapati District, Manipur.

Sl. No.	Botanical name	Family	Local name	Parts use	Ethnic uses	Habit/ Habitat
1	*Paedariafoeteda* L.	Rubiaceae	Uri-oinam	Leaves and Creeper	Leaves are used for the treatment of constipation	Creeper
2	*Clerodendrumcolebrookianum* Walp.	Verbenaceae	KuthapAngouba	Leaves and young shoot	Leaves and young shoot are cooked as vegetable curry items as well as used as best medicine to control blood pressure	Tree
3	*Hodgsoniaheteroclita* (Roxb.)	Cucurbitaceae	Kathai	Fruit	Roasted Fruits are eaten as vegetable as well as used in making chutney	Creeper
4	*Clerodentrumserratum* Linn.	Verbenaceae	Moirang khanambi	Whole plant	Leaves and young shoot are cooked as vegetable curry items. Decoction of roots are used as medicine as	Shrub

					pain killer	
5	*Kaempfera parviflora*	Zingiberaceae	Sing amuba (black ginger)	Rhizome	Used in treatment of diabetes and lower cholesterol level	Herb
6	*Curcuma amada*Roxb.	Zingiberaceae	Yaiheinou man	Rhizome	Used in preparation of chutney	Herb
7	*Brachycorythis obcordata* (Lindl.ex Wall)	Orchidaceae	Kak-uba	Leaves and Shoots	Leaves and shoots are eaten as raw and cooked as vegetables curry items	Herb
8	*Dysoxylumexcelsum*	Mileaceae	Ujao (Yongchak Nambi)	Leaves, Stem and Flower	Used as vegetables curry items	Tree
9	*Alpina officinarum* (Gaerdn.) Burdd	Zingiberaceae	Pulleiman bi	Rhizome	Rhizome are used as spices	Herb
10	*Siphonochilus aethiopicus*	Zingiberaceae	Lam-sing	Rhizome	Rhizome are used as spices	Herb
11	*Parkia timoriana*(DC.) Merr.	Fabaceae	Yongchak	Fruit	Used as vegetables curry	Tree
12	*Leucaena leucocephala*	Mimosaceae	Chigongle i	Fruit	Used as vegetables curry	Tree
13	*Wendlandiagrandis* Cowan	Rubiaceae	Pheija	Flower	Used as vegetables curry	Tree
14	*Accacia pennata* (L) Willd.	Fabaceae	Khang	Leaves and young shoot	Used as vegetables curry	Woody climber
15	*Aalpinia galanga* (L) Willd.	Zingiberaceae	Kanghu	Rhizome	Used as spices	Herb
16	*Canna indica* L.	Cannaceae	Alalu	Rhizome	Used as food in cooking vegetables curry items	Herb
17	*Smallanthussonchifolius*	Asteraceae	Ground apple	Tuber	Eaten as raw as well as cooked as vegetables	Shrub
18	*Zinziberstriolatum* Ludwig Diels	Zingiberaceae	Sarei	Flower	Used as food in cooking vegetables curry items	Herb
19	*Zanthoxylum oxyphyllum*Edgew.	Rutaceae	Singjol	Leaves	Used as food in cooking vegetables curry items	Shrub
20	*Carcumaangui*	Zingiberaceae	Yaipan	Flower	Flower are used as	Herb

	*stifolia*Roxb.				vegetable curry	
21	*Zingiber cassumunar*Roxb.	Zingiberaceae	Tekhaoyaikhu	Rhizome	Use as medicine in treatment of Asthma, constipation and stomach bloating	Herb
22	*Viola serpens* Wall.	Violaceae	Huikhong	Whole plant	Use as vegetables	Herb
23	*Rhynchotechum mellipticum* A. DC.	Gesneraceae	Yembum	Leaves	Leaves are eaten as either raw or cooked as vegetables items as well as use as medicine for the treatment of peptic ulcer and constipation	Shrub
24	*Oroxylum indicum* (L) Vent.	Bignoniaceae	Shamba	Fruit, bark and leaves	Flower and fruits are eaten as raw and cooked as vegetables and also use in treatment of cancer	Tree
25	*Eurya japonica* Thunb.	Ternstromiaceae	uyangan	Leaves	Leaves are use as vegetable curry	Tree
26	*Cinnamomum zeylanicum* Bryn.	Laoraceae	Ushingsa	Bark	Bark powder use as spices. Use as digestive medicine	Tree
27	*Artemisia vulgaris* L.	Asteraceae	Laibakngou	Tender shoot	Tender shoot is cooked as vegetables. Use as medicine as diabetic treatment as well as insect repellent.	Shrub
28	*Rhus semialata* Murray.	Anarcadiaceae	Heimang	Young leaves, flower and fruits	Flower and fruits are eaten as raw, water soaked of dry seeds are used in dyspepsia, peptic ulcer and unhealthy uterus.	Tree
29	*Curcuma caesia*Roxb.	Zingiberaceae	Yaimu	Rhizome	Use in treatment of cough and decoction of C. caesia and O. indicum use as intestinal cancer treatment	Herb
30	*Albizia myriophylla*Benth.	Fabaceae	Yangli	Bark	Use in the preparation of local wine	Tree

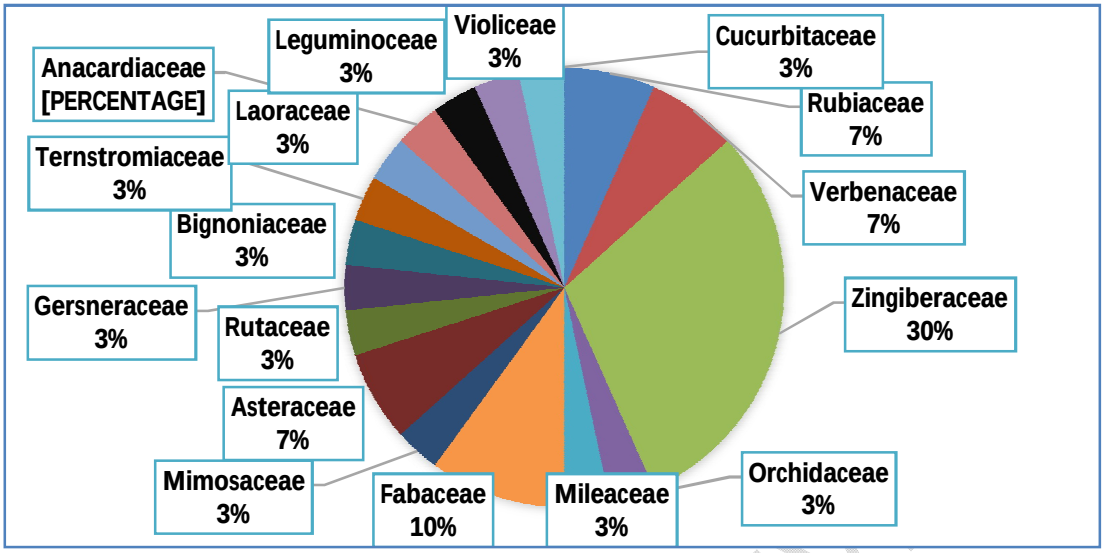

Fig.1 Distribution of medicinal plant species according to their family in the study area

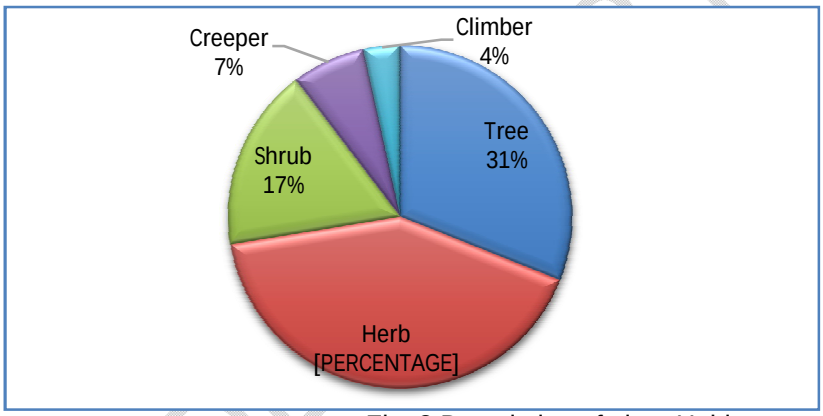

Fig. 2 Description of plant Habit

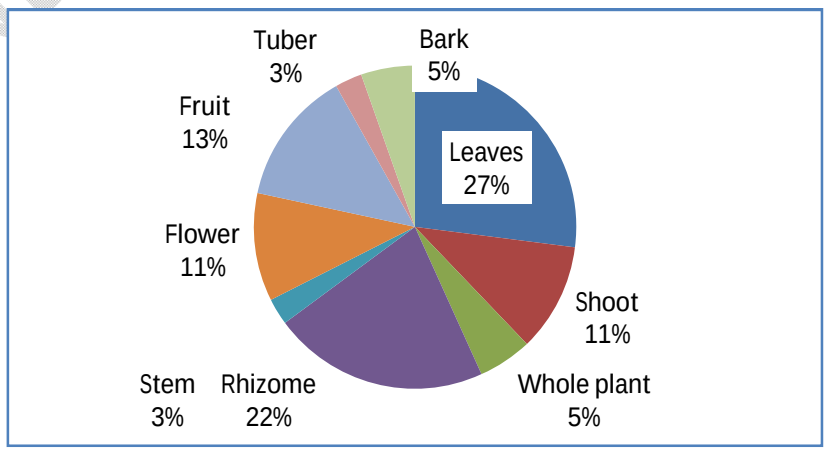

Fig. 3 Utilisation of plant parts

4. CONCLUSION

From the above investigation, it was found that KangchupChingkhong has a variety of wild edible, medicinal plants and herbs. The local people collect wild food for their livelihood purposes. The use of wild plant as food and medicine needs to be properly documentation. Since the plant species may have present different valuable pharma constituents, a thorough investigation about the phyto-constituents present of the said plant species is much needed.

CONSENT (WHEREEVER APPLICABLE): Not applicable

ETHICAL APPROVAL (WHEREEVER APPLICABLE): Not applicable

REFERENCES

1. Teresa Borelli, Danny Hunter, Bronwen Powell, Tiziana Ulian Elision Mattana , Céline Termote , Lukas Pawera , Daniela Beltrame , Daniela Penafiel , Ayfer Tan , Mary Taylor 10 and Johannes Engels. Born to Eat Wild: An Integrated Conservation Approach to Secure Wild Food Plants for Food Security and Nutrition. Plants 2020, 9, 1299
2. I. Kaval, L. Behcet, and U. Cakilcioglu, “Survey of wild food plants for human consumption in Gecitli (Hakkari/Turkey),” *Indian Journal of Traditional Knowledge*, vol. 14, no. 2, pp. 183–190, 2014.
3. Arti Thakur, Somvir Singh, Sunil Puri, "Exploration of Wild Edible Plants Used as Food by Gaddis-A Tribal Community of the Western Himalaya", *The Scientific World Journal*, vol. 2020, Article ID 6280153, 6 pages, 2020. https://doi.org/10.1155/2020/6280153
4. A. V. Setiya, S. D. Narkhede, N. M. Dongarwar,Exploration and documentation of some wildedible plants used by the aboriginals from Gadchiroli District (M.S.) India.IARJSET, Vol. 3, Issue 7, July 2016
5. Laishram Ricky Meitei, Aparajita De, AshihoAsoshii Mao, An ethnobotanical study on the wild edible plants used by forest dwellers in YangoupokpiLokchao Wildlife Sanctuary, Manipur, India. Ethnobotany Research and Applications 23:15 (2022).
6. Rajkumari Supriya Devi and Sanjeet Kumar, Wild Foods Consumed by Ethnic and Local Communities of Imphal, Manipur State of India. Biodiversity Conservation and Livelihood Management. 2021, Chapter 31.