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Wild Edible Plants Consumed by Primitive Tribes of Kotia Hills, Vizianagaram District, Andhra Pradesh, India

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Abstract

The present study mainly focused on the traditional wild food plants used by primitive tribes of Kotial hills, Vizianagaram District, Andhra Pradesh. A total of 75 species were documented as wild plants used for food purposes. Among the 75 species, 28 species are trees followed by 26 herbs, 11 climbers and 10 shrubs. Generally herbaceous plant species are utilized as verdant vegetables. It has been seen that the customary information on wild food plants is on sharp decay. Except if endeavors are made to teach the more youthful generation about their significance, it is very well might be lost in not so distant future. Present study showed that there is an earnest requirement for documentation of customary information identified with the elusive social legacy concerning conventional plant employments. The usage and development of these vegetables ought to be elevated to keep up with the dietary requirements of the peoples in Andhra Pradesh.

Keywords: Andhra Pradesh; Kotia hills; Primitive tribes; Wild edibles; Vizianagaram

Introduction

In India, the tribal human beings rely on forests for their livelihood. The tribal people are very near nature and have hereditary conventional expertise of consuming wild plant life and plant elements *viz.* Tuber, shoots, leaves, culmination and so far as a source of meals. Various tribal sects of India are repositories of rich knowledge on wild plant genetic resources [1]. Even at some point of regular instances, wild plants provide materials of weight loss plan to the much less advanced segment of human community, frequently referred as tribals/ adivasis in India who generally inhabit hilly and different much less available tracts in both advanced and undeveloping international locations [2]. In India, it's far envisioned that approximately 800 species are fed on as wild edible for human consumption plants, mainly through the tribal people [3]. Indigenous understanding of untamed wild edible for human consumption vegetation is vital for maintaining usage of these plant species [4]. Consumption of untamed edible plant life helps rural communities particularly at some point of the duration of seasonal meals shortages.

They frequently serve as alternative supply and treasured complement for nutritionally balanced weight loss plan and also a number one industrial income for each indigenous and non-indigenous human being [5-6].

The role of these safe to eat plant species in preserving human and environmental fitness has been suggested [8-9]. In depth studies concerning its nutritional position have additionally been highlighted in lots of surveys around the world [7].

The traditional knowledge of nutritional food practices has lengthy history in relation to human nutrition. Wild food fit for human consumption flowers had been the mainstay of human weight loss plan for centuries.

Study area

The Vizianagaram District Kotia Hills are controversial place between the governments of Andhra Pradesh and Orissa concerning the possession.

The Kotia Hills lies between $18^{0}26^{1}063^{11}$ and 18^{0} 55^{1} 200^{11} North latitudes and $83^{0}10^{1}426^{11}$ and $83^{0}24^{1}764^{11}$ East longitudes, the elevation of on top of the mean sea level ranges from 850 m to 1615 m.

The Kotia Hills surrounded on the East by Srikakulam district, on the West and South by Visakhapatnam district, on South East by Parvathipuram Revenue Division and North-West by Koraput district of Orissa state.

The tribal group inhabitants of the study area in the main consist of Mannedora, Konda Dora, Jatapu and Savara.

The investigation of wild edible study was under taken with a view to find out the plants utilized by tribes of Kotia Hills in elite twenty seven pockets notably to use numerous wild edible plant species (Figure 1).

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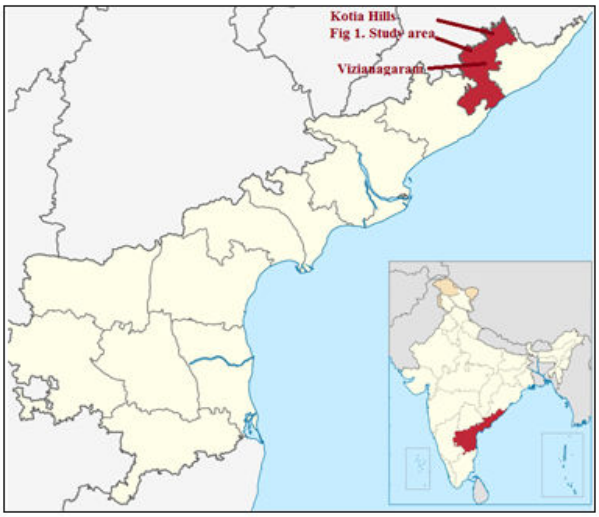

Figure 1: Study Area

Material and Methodology

The method employed in this study were designed with the purpose of providing base line information on the use of plant species in local tribal people through field survey and field visits to various areas from January 2021 to November 2021 in the Kotia hills of Vizianagaram district, Andhra Pradesh.

Personal interviews and group discussions with local inhabitants revealed some valuable and specific information about the plants that were authenticated by crosschecking.

In addition to crosschecking and recording folk names of plants through collecting voucher specimens, it is important to crosscheck information with different people and compare the results from different methods [18].

Results and Discussion

A sum of 75 wild edible plant species having a place with 56 genera and 37 families are recognized as being utilized as wild edible plants by the sources from 55 families reviewed.

Out of 37 families Amaranthaceae was observed to be the most well-known family with 6 species, Tiliaceae, Solanaceae, Dioscoreaceae, Asclepiadaceae and Arecaceae with 4 species, Olacaceae, Moraceae, Euphorbiaceae, Ebenaceae and Araceae with 3 species, Sapindaceae, Rutaceae, Rhamnaceae, Mimosaceae, Menispermaceae, Liliaceae, Boraginaceae and Aizoaceae with 2 species and rest of the 18 families everyone had single species (Figure 2).

Leaves are collected in different seasons, cooked and eaten with their staple food. Maximum tribal people are using leafy vegetable as a part of their food.

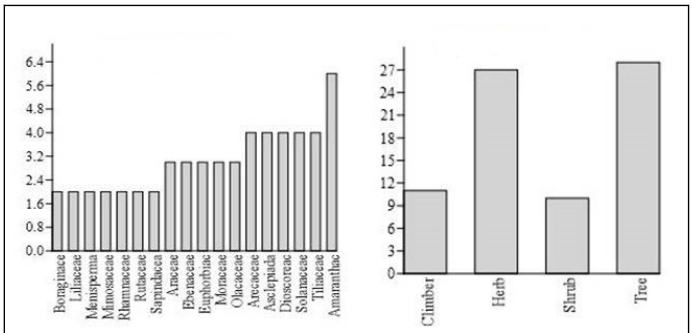

Figure2: Represents graph of Families and Life forms

Of the reported growth forms, trees and herbs make up the highest proportion of the edible species comprising 28 and 26 respectively and the remainder species climbers 11 and shrubs 10 (Figure 1). Within the edible parts of the wild food plant, fruits (31) and leaves (27) were most widely used and the remainders were stem and tender stems, tuber and seed.

The time of collection began from May and proceeded till the finish of December which was regularly collected through as vegetables, natural products, flavors, chutney, and so forth generally aerial parts like leaves, tender shoots and flowers were utilized as vegetables. The present report on the use of plants for food purposes draws support from earlier studies in different parts of India.

Some eminent exploration commitments on wild edible plants from India are 151 species having a place with 86 genera and 49 families in the Khasi clans of Meghalaya to survey their agricultural significance [10]. In diversity, use design and native employments of 217 plant species having a place with 160 genera of 68 families in and around a cement factory in Bilaspur district of Himachal Pradesh [11].

Detailed 125 plant species have a place with 102 genera under 54 families as wild edibles eaten by the ethnic individuals of Kochbihar locale of West Bengal state [12]. Total 30 eatable verdant vegetables accessible in South India alongside their pharmacological advantages [13]. 21 wild edible plant species having a place with 19 families with their parts utilized by nearby just as ancestral individuals inhabitating in rustic spaces of Odisha [14-15].

A portion of the respondents even remarked that the youthful grown-ups are not taking an interest in assortment and handling of these wild verdant vegetables and accordingly the information about a portion of the animal groups might vanish. This was likewise announced by different workers [16-17] from somewhere else. Tubers of certain species are cooked and eaten as curries. Rhizomes and tubers after collecting from forest are washed, kept for sometimes in turmeric powder (Curcuma longa) and water for removing bitterness and harmful contents. It is also used as a substitute for rice at the time of non- availability of food (Table 1).

Figure 3: Wild edible plants used by primitive tribes of Rampachodavaram.

1. *Dillenia pentagyna Roxb.* 2. *Diospyros malabarica (Desr.) Kostel.* 3. *Ficus semicordata Buch.-Ham.* ex Sm. 4. *Caralluma adscendens* (Roxb.) *R Br.* 5. *Cansjera rheedii Blanco.* 6. *Cucurbita maxima Duchesne.* 7. *Antidesma bunius Spreng.* 8. *Dioscorea pentaphylla L.* 9. *Dioscorea hispida Dennst.* 10. *Ficus auriculata Lour.* 11. *Bambusa bambos (L.) Voss*. 12. *Bambusa bambos (L.) Voss*

Table 1: Wild edible plants used by primitive tribes of Kotia Hills, Vizianagaram district.

S. No	Scientific name	Common name	Habit	Parts	Mode of uses
1	*Allmania nodiflora (L.) Wt.*	Nagali kura	Herb	Leaves	Leafy vegetable
2	*Alocasia fornicate (Roxb.)Schott.*	Dumparase	Herb	Tuber	Boiled tubers are eaten
3	*Alternanthera paronychioides St. Hil.*	Ponnaganti	Herb	Leaves	Leafy vegetable
4	*Alternanthera sessilis (L.) DC.*	Ponnaganti kura	Herb	Leaves	Leafy vegetable
5	*Amaranthus spinosus L.*	Doggali	Herb	Leaves	Leafy vegetable
6	*Amaranthus tricolor L.*	Totakura	Herb	Leaves	Leafy vegetable
7	*Amaranthus viridis L.*	Chirryaku	Herb	Leaves	Leafy vegetable
8	*Amorphophalus paenofolius (Dennst.)*	Adavi kanda	Herb	Leaves	Used as a curry
9	*Anisochilus carnosus (L.f.) Benth.*	Kodipunju chettu	Herb	Leaves	Leafy vegetable

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10	*Antidesma acidum Retz.*	Pulleru	Tree	Leaves	Leafy vegetable
11	*Aponogeton echinatus Roxb*	Kotigedde	Herb	Tuber	Boiled tubers are eaten
12	*Arisaema tortuosum (Wall) Schott & Endl.*	Haavumari gidda	Herb	Tuber	Corm eaten cooked.
13	*Asparagus racemosus Willd.*	Shatavari	Herb	Tuber	Tuber eaten cooked
14	*Bambusa arundinacea (Retz.) Roxb.*	Veduru	Tree	Stem	Used as curry
15	*Cansjera rheedii Blanco*	Mandikura	Shrub	Leaves	Used as curry
16	*Caralluma adscendens R.Br.*	Kundaetikommulu	Herb	Stem	As chutney.
17	*Caralluma attenuata Wt.*	Moulya	Herb	Stem	Used as a curry.
18	*Cardiospermum halicacabum L.*	Buddalalumu	Climber	Leaves	Leafy vegetable.
19	*Ceropegia tuberosa Roxb.*	Guttalu	Herb	Tuber	Boiled tubers are eaten
20	*Chlorophytum laxum R.Br*	Nelatengu	Herb	Tuber	Tuber eaten cooked
21	*Cocculus hirsutus (L.) Diels*	Dusseru	Climber	Leaves	Used as a curry.
22	*Colocasia esculenta (L.) Schott. & Endl.*	Chama	Herb	Leaves	Leafy vegetable.
23	*Cordia dichotoma Forst.f.*	Iriki	Tree	Fruit	Fruits are eaten raw.
24	*Costus speciosus (Koen.) Sm.*	Beskha	Herb	Tuber	Used as chutney.
25	*Cucurbita maxima Duchesne*	Gummadi	Climber	Leaves	Leaf vegetable
26	*Curculigo orchioides Gaertner*	Nela tengu	Herb	Root	Roots made into Drink
27	*Decalepis hamiltonii Wight & Arn.*	Makali beru	Climber	Root	Roots made into pickles
28	*Dioscorea bulbifera L.*	Nookala gadda	Climber	Tuber	Boil tubers are eaten
29	*Dioscorea oppositifolia L.*	Gentika dumpa	Climber	Tuber	Boil tubers are eaten

30	*Dioscorea pentaphylla L.*	Yelleru gadda	Climber	Tuber	Boil tubers are eaten
31	*Dioscorea tomentosa Spreng.*	Adavi kiska	Climber	Tuber	Boil tubers are eaten
32	*Diospyros chloroxylon Roxb.*	Illintha	Tree	Fruit	Ripe fruits are edible.
33	*Diospyros melanoxylon Roxb.*	Tuniki	Tree	Fruit	Ripe fruits are edible.
34	*Diospyros perigrina (Gaertn.) Guerke*	Adavi sapota	Tree	Fruit	Ripe fruits are edible.
35	*Ehretia canarensis (Cl.) Gamble*	Iriki	Tree	Fruit	Ripe fruits are edible.
36	*Ehretia laevis Roxb.*	Pisini	Tree	Fruit	Ripe fruits are edible.
37	*Ficus auriculata Lour.*	Bodda	Tree	Fruit	Fruits are eaten raw.
38	*Ficus palmata Forssk.*	Chinabodda	Tree	Fruit	Fruits are eaten raw.
39	*Ficus racemosa L.*	Bodda	Tree	Fruit	Fruits are eaten raw.
40	*Flacourtia indica(Burm. f.) Merr.*	Chirumanu	Tree	Fruit	Fruits are eaten raw.
41	*Grewia flavescens Juss.*	Jaana	Shrub	Fruit	Fruits are eaten raw.
42	*Grewia hirsuta Vahl*	Juvilika	Tree	Fruit	Fruits are eaten raw.
43	*Grewia tiliaefolia Vahl*	Tada	Tree	Fruit	Fruits are eaten raw.
44	*Grewia villosa Willd.*	Pipali	Shrub	Fruit	Fruits are eaten raw.
45	*Guazuma ulmifolia Lam.*	Kanika chettu	Tree	Fruit	Fruits are eaten raw.
46	*Moringa oleifera Gaertn.*	Munaga	Tree	Leaves	Leafy vegetable
47	*Mucuna pruriens (L.) DC.*	Pativratha	Climber	Fruit	Unripe fruits roasted
48	*Murraya koenigii (L.) Spreng.*	Karivepa	Shrub	Leaves	Used in curry.
49	*Nelumbo nucifera Gaertn.*	Taamara	Herb	Leaves	Used in curry.
50	*Neptunia oleracea Lour.*	Attipatti	Herb	Leaves	Used in curry.

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51	*Olax scandens Roxb.*	Turkatoppi	Shrub	Stem	Used in curry.
52	*Oxalis corniculata L.*	Pilliadugu	Herb	Leaves	Leaves are used as curry
53	*Phoenix acaulis L.*	Adavi eetha	Shrub	Fruit	Ripe fruits are edible.
54	*Phoenix loureirii Kunth*	Chitteetha	Shrub	Fruit	Ripe fruits are edible.
55	*Phoenix sylvestris (L.) Roxb.*	Eatha	Tree	Fruit	Ripe fruits are edible.
56	*Phyllanthus emblica L.*	Usiri	Tree	Fruit	Preparation of pickle.
57	*Physalis angulata L.*	Buddalalumu	Herb	Leaves	Leafy vegetable.
58	*Physalis minima L.*	Neyibuddaku	Herb	Leaves	Leafy vegetable.
59	*Pithacellobium dulce (Roxb.) Benth.*	Seema chintha	Tree	Leaves	Used as a curry.
60	*Salacia chinensis L.*	Allitiga	Climber	Fruit	Fruits are eaten raw.
61	*Scheichera oleosa (Lour.) Oken*	Pusku	Tree	Fruit	Fruits are eaten raw.
62	*Schrebera swietenioides Roxb.*	Mokkam	Tree	Fruit	Fruits are eaten raw.
63	*Scutia myrtina (Burm.f.) Kurz*	Kondapariki	Tree	Fruit	Fruits are eaten raw.
64	*Securinega leucopyrus (Willd.) Muell.-Arg.*	Tellapulcheru	Tree	Fruit	Fruits are eaten raw.
65	*Semecarpus anacardium L.f.*	Nalla jeedi	Tree	Fruit	Fruits are eaten raw.
66	*Solanum nigrum L.*	Kamanchi	Herb	Fruit	Fruits are eaten raw.
67	*Solanum virginianum L.*	Mulaka	Shrub	Fruit	Fruits are eaten raw.
68	*Strychnos potatorum L.f.*	Iriya	Tree	Fruit	Fruits are eaten raw.
69	*Tinospora cordifolia (Willd.) Hook.f.*	Bael tiga	Climber	Leaves	Used as a curry.
70	*Toddalia asiatica (L.) Lam.*	Mrapagandra	Shrub	Leaves	Used as a curry.
71	*Trianthema decandra L.*	Tella galijeru	Herb	Leaves	Used as a curry.

72	*Trianthema portulacastrum L.*	Galijeru	Climber	Leaves	Leafy vegetable.
73	*Tribulus terrestris L.*	Palleru	Herb	Leaves	Leafy vegetable.
74	*Ximenia americana L.*	Nakkera	Tree	Fruit	Pulp taken orally.
75	*Ziziphus mauritiana Lam.*	Raegu	Tree	Fruit	Ripe fruits are edible.

Conclusion

Wild edibles are less susceptible to illnesses, can be developed effectively without utilization of pesticide. Amusingly these plants are as yet unclear or less known to different areas of the planet. The wild consumable plant species will be promoted after phytochemical examination and Neutraceuticals considers. Documentation of wild edible from ethno botanical methodology is significant for improving the comprehension of Native information framework. There are numerous wild edible plants are as yet neglected and they must be concentrated logically. We perceive the requirement for gathering, saving and recording this information as a critical and principal need for keeping up with the neighbourhood social customs as well as to work with the examination on new food sources somewhere else too.

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References

1. Khoshoo TN (1991) Conservation of biodiversity in biosphere. Indian Geosphere Biosphere Programme: Some Aspects. Har-Anand Publications, Vikas Publishing House Private, New Delhi, India :183-233
2. Arora RK and Pandey A (1996) Wild edible plants of India: Diversity, Conservation and Use. (National Bureau of Plant Genetic Resources, New Delhi):1
3. Singh HB and Arora RK (1978) Wild Edible Plants of India. Indian Council of Agricultural Research (ICAR), New Delhi
4. Jasmine TS, Jeeva S, Febreena G L, Mishra BP and Laloo RC(2007)Wild edible plants of Meghalaya, North- East India. Natural Products Radiance 6: 410-426
5. Prashant Kumar GM and Shiddamallayya N (2014) Documentation of wild leafy vegetables of Hassan district, Karnataka. Int J Pure Appl Biosci 2: 202-208
6. Reddy KN, Pattanaik C, Reddy CS and Raju VS (2007) Traditional knowledge on wild food plants in Andhra Pradesh. Indian J Tradit Knowl 6:223-229
7. Tanji A, Nassif F (1995) Edible weeds in Morocco. Weed Technol 9: 617-620
8. Johns TE, Eyzaguirre PB (2006) Linking biodiversity, diet and health in policy and practice. Proc Nutri Soc 65: 182-189
9. Frison EA, Smith IF, Johns T, Cherfas J, Eyzaguirre P (2006) Agricultural biodiversity, nutrition, and health: making a difference to hunger and nutrition in the developing world. Food Nutr Bull 27:167-179
10. Jeeva S (2009) Horticultural potential of wild edible fruits used by the Khasi tribes of Meghalaya. J Hort Forestry 1:182-192
11. Sharma P and Mishra NK (2009) Diversity, utilization pattern and indigenous uses of plants in and around a cement factory in Bilaspur district of Himachal Pradesh, North-Western Himalaya. J Biol Forum an Int J 1:78-80
12. Bandyopadhyay S and Mukherjee SK (2009) Wild edible plants of Koch Bihar district, West Bengal. Nat Prod Radiance 8: 64-72
13. Kumar CKA, Sree MSD, Joshna A, Lakshmi SM and Kumar DS (2013) A review on South Indian Leafy Vegetables. Glob Trends Pharm Sci. 4:1248-1256
14. Kumar M, Husaini SA, Uddin Q Aminuddin, Kumar K and Samiulla L (2013) Ethnobotanical study of the wild edible plants from Odisha, India. Life Sci Leafl 7:13-20
15. Ramachandran VS and Vani CU (2013) Knowledge and uses of wild edible Plants by Paniyas and Kurumbas of Western Nilgiris, Tamil Nadu. Indian J Nat Prod Resour 4: 412-418
16. Bonet MA, Valles J (2002) Use of non-crop food vascular plants in Montseny biosphere reserve (Catalonia, Iberian Peninsula). I Int J Food Sci Nutr 53:225-248
17. Narayanan MKR, Kumar NA (2007) Gendered knowledge and changing trends in utilization of wild edible greens in Western Ghats, India. Indian J Tradit Knowl 6:204-216
18. Cunningham AB (2001) Applied ethnobotany, people wild plant use and conservation. Sterling, VA, London, Earth Scan Publication Ltd.

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