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## RESEARCH ARTICLE

# SOME EXOTIC PLANTS IN HUMAN CONSUMPTION FROM AHMEDNAGAR DISTRICT, MAHARASHTRA

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**ABSTRACT**

A plant as a source of food is a fundamental element in the life of human beings. Though there are plenty of vegetable, fruits and other crops have been modified for good yield time to time throughout the world but the demand of the wild vegetables and fruits is increased now a days. The indigenous people, who dwell in and nearby forests, gather and consume wild edible plants as snacks, as a vegetable and at times of food scarcity. These people consume wild edible plants and rely on these resources to meet their food needs particularly in periods of food crisis. The diversity of wild species in Ahmednagar district offers wide range of edible plants and contributes to supplementary food assurance. The present ethnobotanical explorations conducted in region resulted in the information on about conventional plant uses of 52 plant species belonging to 32 families. Of these, maximum species belongs to Amaranthaceae with 5 species, 4 species each to Caesalpiniaceae, Fabaceae and Euphorbiaceae. Plants used in different recipes include 26 plants in curry preparation, 7 plants for making 'chutney' of pickled while 15 plant parts are consumed directly. Majority of edible plant parts are from fruits (19 species), leaves (9 species), seeds (6 species), Flowers (3 species) and for 10 species stem, tender shoots, underground parts like rhizome, tuber, etc. are used.



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## INTRODUCTION

Since prehistoric times, human beings all over the universe have been using plants for fulfilling their fundamental requirements like, food, clothes, medicine, shelter, etc. Studies on centuries old traditional knowledge about plants bring out information which has immense potential for wellbeing of society. Exotic plants, which have origin in some other countries are naturalised since time immemorial. Mention of several exotic species in Indian Sanskrit treaties like Ramayana, Mahabharata, Vedas and Ayurveda shows probable introduction of exotic species in Indian flora Anonymous, (1960), Chauhan (1999), Kapoor (2001), Karnick, (1975), Macdonell and Keith (1912), Prasad, and Misra (1976), Sagreiya, (2005) and Tulsidas, (1966). Various plant parts are consumed as food either raw or cooked or as spices, condiments, etc. Present work resulted in 52 wild edible plant species belonging to 32 families. Of these, 26 plants used for preparation of curry, 7 plants for making 'chutney' of pickled. While plant parts of 15 species are consumed directly. Majority of edible plant parts consumed are fruits (19 species), leaves (9 species), seeds (6 species), Flowers (3 species) and for 10 species stem, tender shoots, underground parts like rhizome, tuber, etc. are used. Even after the accessibility of variety of food crops, wild plants as a food source have represented a significant component of the human diet. Some recent studies in different part of India have shown that the several wild plants have nutritive potential and are being used all over. [Bhogaonkar *et al.,* (2010), Hajra and Chakravorty. (1981), Haridasan *et al.,*. (1990), Krishna *et al.,* (1999), Kulkarni and Kumbhojkar (1993), Kulkarni *et al.,* (2003), Mulay and Sharma (2014), Reddy *et al.,* (2007), Sharma and Savant (2012), Sharma and Singh (2001), Singh (1995), Sundriyal, and Sundriyal. (2001) and Vijigiri *et al.,* (2013)]. Now a day, as the existing food crops are not fulfilling the complete need of required nutrients, hence, more emphasis is being given to wild food plants as a supplementary food source. The Ahmadnagar district is largest district of Maharashtra occupying the central position in the state with an area of 17,413 sq. km. As far as botanical explorations in Ahmednagar is concerned, several people have made notable contributions, such as Billore and Hemadri (1972), Santapau

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(1951), Santapau and Irani (1962), most of these works resulted in enrichment of the Herbaria except few publications, like Shirke (1983). Cooke (1909-1917) has recorded plants from Ahmednagar district in their publications. Flora of the Ahmednagar district worked out by Pradhan and Singh (1999).

## METHOD OF SURVEY

The present work is done during 2011-2016 in different parts of Ahemadnagar. Old experienced men and women were interviewed to know about the utility of plants growing in their localities. Herbarium specimens of the exotic plants prepared and identification was done following standard literature Cooke, (1967) Singh et al., (2000 and 2001), Cooke, (1958), Pradhan and Singh, (1999). Herbarium specimens are deposited in the Research in Botany, Shri Muktanand College, Gangapur, and Aurangabad.

### Enumeration

The enumeration consist of botanical name, followed by vernacular name in Marathi language (in inverted comma'), Family name (in capital letters), and a Native country or region of the plant. The edible uses with plant parts and mode of preparation are provided.

1. ***Acacia nilotica*** (L.) Willd. ex Del. ssp. ***indica*** (Bth.) Brenan '*Babhul*'. MIMOSACEAE.

*Native :* N. Africa, Arab

*Use*: Gum is fried and used to prepare laddus.

2. ***Achyranthes aspera*** L. var. ***aspera*** *'Aghada'*. AMARANTHACEAE.

*Native:* Tropics

*Use:* Curry is prepared by using tender leaves.

3. ***Alangium salvifolium*** (L. f.) Wangerin. '*Ankul'*. MALVACEAE.

*Native*: Tropics.

*Use:* Ripe fruits are consumed by local people.

4. ***Alternanthera sessilis*** (L.) *DC.* '*Chimutkata* '. AMARANTHACEAE.

*Native:* Tropics

*Use:* Curry is prepared by using tender shoots and leaves.

5. ***Amaranthus spinosus*** L. Sp. *'Kateri-Math'*. AMARANTHACEAE.

*Native:* America.

*Use:* Curry is prepared by using young leaves.

6. ***Annona reticulata*** L**.** *'Ramphal',* ANNONACEAE

Native: West Indies

*Use*: Ripe fruits are consumed.

*7.* ***Annona squamosa*** L**.** '*Sitaphal',* ANNONACEAE.

*Native:* Tropical America

*Use*: Ripe fruits are consumed.

*8.* ***Argemone mexicana*** L**.** '*Piwaladhotra'*. PAPAVERACEAE.

*Native:* Mexico, Central America

*Use:* Stem of this is chopped to remove prickles, kept overnight in water and cooked as a curry during famine period.

9. ***Balanites aegyptiaca*** (L.) Del. '*Hingu'*. BALANITACEAE.

*Native:* Africa , Arab.

*Use***:** Curry is prepared by young leaves and tender shoots.

10. ***Bauhinia racemosa*** Lam. '*Apata'*. FABACEAE.

*Native:* Sri Lanka

*Use:* Curry is prepared by using flowers.

11. ***Boerhavia repens*** L. var**.** ***diffusa*** (L.) Hook. f. '*Punernawa'*. NYCTAGINACEAE.

*Native:* Tropics.

*Use:* Leaves are used to prepare curry during famine period.

12. ***Brassica juncea*** (L.) Czern. and Coss. '*Mohari'*. BRASSICACEAE.

*Native:* Tibet.

*Use*: Seeds used in curry and pickles as condiments.

13. ***Carissa congesta*** Wight, '*Karvand*'. APOCYNACEAE.

*Native:* Malasiya.

*Use:* Ripe fruit are consumed by local people.

*14.* ***Cassia occidentalis*** L. '*Rantakala*'. CAESALPINIACEAE.

*Native:* S. America.

*Use:* 'Chutney' is prepared by tender leaves and green chili.

15. ***Cassia sophera*** L. *'Jangli-takala'*. CAESALPINIACEAE.

Native: Panatropical.

*Use:* 'Chutney' is prepared by leaves and green chili.

16. ***Cassia tora*** L. '*Takla, Tarota'*. CAESALPINIACEAE.

*Native:* America.

*Use:* Mature seeds crushed used as substitute for drink like coffee/Tea.

17. ***Celosia argentea*** L. 'Kombada', AMARANTHACEAE.

*Native:* Tropical Africa.

*Use:* Curry is prepared by using tender leaves during famine period.

18. ***Cleome gynandra*** L**.** '*Pandhari tilvan'*. CAPPARACEAE.

Native: Tropical America.

*Use:* Curry is prepared by tender leaves and flowers.

19. ***Coccinia grandis*** (L.) Voigt, '*Tondli'*. CUCURBITACEAE.

Native: Africa.

*Use:* Curry is prepared by unripe fruits.

20. ***Cocculus hirsutus*** (L.) Diels '*Vasanvel*'. MENISPERMACEAE.

Native: Tropics.

*Use:* Curry is prepared by tender leaves.

21. ***Cocos nucifera*** L. '*Narel*'. ARACACEAE.

Native: Africa.

*Use*: Fruit endosperm consumed and also used in various food recipes.

22. **Cymbopogon citratus** (DC.) Stapf. '*Gavatichaha'*. POACEAE.

*Native:* Malesia.

*Use*: Leaves crushed and added while preparing tea for good fragrance.

23. ***Digera muricata*** (L.) Mart. '*Kunjuru*'. AMARANTHACEAE.

*Native:* America.

*Use:* Curry is prepared by using leaves.

24. ***Dioscorea bulbifera*** L. '*Dukarkand*'. DIOSCOREACEAE.
*Native:* Tropical America.
*Uses:* Tubers are boiled and consumed; curry is also prepared from bulbils.
25. ***Dioscorea oppositifolia*** L. '*Kand'*. DIOSCOREACEAE.
*Native:* Panatropical.
*Use:* Tubers are boiled and consumed by local people.
26. ***Eclipta prostrata*** (L.) L. '*Maka*'. ASTERACEAE.
Native: South America.
*Use:* Curry is prepared by using leaves.
27. ***Emblica officinalis*** Gaertn. ' Awala'. PHYLLANTHACEAE.
*Native:* Sri Lanka.
*Use:* Fruits are eaten and also pickled.
28. ***Euphrobia geniculata*** Orteg. '*Dudhi*'. EUPHORBIACEAE.
*Native:* Paleotropical.
*Use:* Curry is prepared by using tender leaves during famine period.
29. ***Ficus carica*** L. '*Anjir*', MORACEAE.
*Native:* Mediterranean region
*Use:* Ripe fruits are consumed by local people.
30. ***Ficus racemosa*** **L.** '*Umbar*', MORACEAE.
*Use*: Ripe fruits are consumed.
31. ***Hibiscus sabdariffa*** L. *'Lalambadi'*. MALVACEAE.
*Native:* America, West Africa.
*Use:* 'Chutney' is made by flower calyx and curry is also prepared from leaves.
32. ***Lannea coromandelica*** (Houtt.) Merr. '*Shimpti',* ANACARDIACEAE.
*Native:* Myanmar.
*Use*: Gum is edible.
33. ***Manihot esculenta*** Crantz. EUPHORBIACEAE.
*Native:* Tropical America.
*Use:* Leaves used as leafy vegetables to prepare curry.
34. ***Melilotus indica*** (L.) All. *'Ran-methi'*. FABACEAE.
*Native:* South Europe, Urasia.
*Use:* Curry is prepared by leaf and young shoots.
35. ***Merremia gangetica*** (L.) Cufod. CONVULVULACEAE.
*Native:* Tropical America.
*Use*: Curry prepared by leaves during famine period.
36. ***Moringa oleifera*** Lam. '*Shevga*'. MORINGACEAE.
*Native:* Africa, Madagascar.
*Use*: Curry is prepared by young fruits.
37. ***Morus alba*** **L.** *'Tuti',* MORACEAE
*Native:* Myanmar.
*Use:* Ripe fruits are consumed by local people.
38. ***Mucuna pruriens*** (L.) DC. '*Khaj kuhiri'*. FABACEAE.
*Native:* Tropics.
*Use:* Seeds are used as vegetable and boil seeds are eaten.
39. **Nymphaea nouchalli** Willd. '*Kamal*', NYMPHAEACEAE.
*Native:* China.
*Use* Rootstock is used to prepare curry.
40. ***Ocimum americanum*** L. *'Rantulsi'*. LAMIACEAE.
*Native:* Tropical America.
*Use:* Leaves used in 'chutney' preparation.
*41.* ***Opuntia elatior*** Mill. *'Nivdung'*. BIGONIACEAE.
*Native:* South America.
*Use:* Ripe fruits are consumed by local people.
42. ***Passiflora foetida*** L. ' *Krishnkamal'*. PASSIFLORACEAE.
*Native:* Brazil , Tropical America.
*Use:* Fruit juice with lemon juice and sugar and drink (sharbat) is prepared.
43. **Phyllanthus acidus** (L.) K. '*Ran*'. EUPHORBIACEAE.
*Native:* Malay Islands and Madagascar.
*Use:* Fruits are consumed by children and also 'Chutney' is prepared by unripe fruits.
44. ***Physalis minima*** L. '*Popati*'. SOLANACEAE.
*Native:* South America.
*Use:* Ripe red berries are consumed by children.
45. ***Pithecellobium dulce*** (Roxb.) Bth. '*Vilayatichinch'*. MIMOSACEAE.
*Native:* Mexico, Central America.
*Use:* Seed kernels are consumed by local people.
46. ***Plumbago zeylanica*** L. *'Chitrak'*. PLUMBAGINACEAE.
*Native:* Africa, Aurstralia, Hawai.
*Use:* Curry is prepared by tender leaves during famine period.
*47.* **Sesbania grandiflora** (L.) Poir. '*Hataga'*. FABACEAE.
*Native:* Malesia.
*Use:* Curry is prepared by using flowers.
48. **Solanum tuberosum** L. '*Batata*'. SOLANACEAE.
Native: Temperate regions.
*Use:* Curry is prepared by tubers.
49. ***Syzygium cumini*** (L.) Skeels '*Jambul*'. MYRTACEAE.
Native: Jamaica.
*Use*: Ripe fruits are consumed by people.
50. ***Tamarindus indica*** L. '*Chinch*'. CAESALPINIACEAE.
*Native:* Tropical Africa.
*Use:* Fruits are used as additives in various food recipes.
51. ***Terminalia catappa*** L. '*Deshibadam*', COMBRETACEAE.
*Native:* Moluccas.
*Use:* Seed cotyledons are consumed by children.
52. ***Ziziphus mauritiana*** Lam. ' Bor', RHAMNACEAE.
*Native:* Africa.
*Use:* Fruits are consumed by people.

Since the time immemorial the human societies residing in inaccessible areas are using a number of wild plants for edible purposes. Most of the species described in the paper are wild very few are in cultivation as well as wild. The wild food plants which are free from the pesticide, insecticidal residues as most of the commercial crops exhibit today; have not received sufficient attention all over the world. As an alternative to commercial crop, attempt should be made to popularize wild food plants. So that increasing demand for food can be fulfilled. Present paper provides information about a total of 57 plant species belonging to 37 families were recorded after conducting survey Amaranthaceae with 5 species, 4 species each to Caesalpiniaceae, Fabaceae and

Euphorbiaceae. Plants used in different recipes include 26 plants in curry preparation, 7 plants for making 'chutney' of pickled while 15 plant parts are consumed directly. Majority of edible plant parts are from fruits (19 species), leaves (9 species), seeds (6 species), Flowers (3 species) and for 10 species stem, tender shoots, underground parts like rhizome, tuber, etc. are used.

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## REFERENCES

Anonymous, 1960. Valmiki Ramayana (along with Hindi translation) Gita Press, Gorakhpur.

Bhogaonkar Prabha Y., Vishal R. Marathe and Prachi P. Kshirsagar (2010). Documentation of Wild Edible Plants of Melghat Forest, Dist. Amravati, Maharashtra State, India. Ethnobotanical Leaflets 14: 751-58.

Billore, K.V., Hemadri, K. 1972. Observation on the flora of Harishchandragarh, sahyadri range, Maharashtra. *Bull. Bot. Bull. Bot. Surv. India*, 1969, 11 335-346

Chauhan, D.S. 1999. Radhakrishna, B.P. and Merh, S.S. (editors): Vedic Sarasvati, p.35-44

Cooke, T. (1958 Repr. Ed.). Flora of the Presidency of Bombay, Vol I-II Reprinted (2nd ed.) 1967. BSI, Kolkata, Govt. of India

Hajra, P. K. and P. Chakravorty, 1981. A survey of wild edible plants sold in the Lal market of Gangtok. Indian Journal of Forestry 4:217–220.

Haridasan, K., L. R. Bhuyan, and M. L. Deori. 1990. Wild edible plants of Arunachal Pradesh. Arunachal Forest News 18:1and21–8.

Kapoor, L.D., 2001. *Handbook of Ayurvedic Medicinal Plants*, CRC Press LLC.

Karnick, C. R. Ethnobotanical records of drug plants described in Valmiki Ramayana and their uses in Ayurvedic system of medicine Quart. J. Crude drug Res. 13, pp. 143 – 154 (1975).

Krishna Prasad, V., Rajagopal, T., Yogesh Kant and Badarinath, K. V. S. 1999. Food Plants of Konda Reddis Agency, East Godavari District, Andhra Pradesh- A case study. Ethnobotany., 11, 92-96.

Kulkarni, D. K and Kumbhojkar, M. S. 1993. Kitchen garden plants of Mahadeokoli Tribe in Maharashtra. *Ethnobotany*., 5, 119-127.

Kulkarni, D. K., Agte, V. V and Kumbhojkar, M. S. 2003. Leafy vegetables consumed by Mahadcokoli Tribe in Western Maharashtra with their nutritional potential. *Ethnobotany*., 15, 34-38.

Macdonell and Keith, 1912. Pancavimsa Brahmana, Jaiminiya Upanisad Brahmana, Katyayana Srauta Sutra, Latyayana Srauta; tra, Sankhayana Srauta Sutra;, II:55.

Mulay, J.R. and P. P. Sharma, 2014. Some Underutilised Plant Resources as a source of food from Ahmednagar District, Maharashtra, India. *Discovery*, 2014, 9(23), 58-64.

Pradhan, S.G, Singh, N. P. *Flora of Ahmednagar District, Maharashtra.* 1999. Bishen Singh Mahendra Pal Singh, Dehradun

Prasad, S. and Misra, A. K. A comparative study of the floristic account in Ramayana of Valmiki and Tulsidas (Ramcharit Manas). Recent Advances in Plant Sciences, (Seminar) Abstracts of Papers, Kalyani 91976).

Reddy, K. N., Chiranjibi P., Reddy, C. S and Raju, V. S. 2007. Traditional knowledge on wild food Plants in Andhra Pradesh. *Indian Journal of Traditional Knowledge*, 6(1),223-229.

Sagreiya, K. P. 2005. Forest and Forestry, National Book Trust, India.

Santapau, H. and Henry, A. N. 1962. A dictionary of the flowering Plants in India. CSIR; New Delhi.

Sharma, P. P. and R. J. Savant, 2012. Some less-known plants parts as supplementary foods. *International Multidisciplinary Research Journal*, 2012, 2(12):12-13

Sharma, P.P. and Singh, N.P. 2001. Ethnobotany of Dadra Nagar Haveli and Daman (UT), Botanical Survey of India, Kolkata.

Shastri, H. P. The Ramayana of Valmiki (translated) Shanti Sadan, London. 1957.

Shirke, D.R. 1983. The study of the flora of Ahmednager. *J. Univ.* the flora of Ahmednager. *J. Univ. Poona Sci. Tech.* 1983, 56, 55-70.

Singh NP, Karthikeyan S. (Eds). 2000. Flora of Maharashtra State Dicotyledones. Botanical Survey of India, Kolkata, 2000, 1

Singh, N. P., Laxminarasimhan, P., Karthikeyan, S., Prasanna, P. V. (Eds). 2001. Flora of Maharashtra State Dicotyledones. Botanical Survey of India, Kolkata, 2001, 2

Singh, V. 1995. Lesser known wild edibles of Sikkim Himalaya. *Journal of Economic and Taxonomic Botany* 19:2385–390.

Sundriyal, Manju and R. C. Sundriyal. 2001. Wild edible plants of the Sikkim Himalaya: Nutritive values of selected species. *Economic Botany* 55:3377–390.

Tulsidas, Goswami, 1966. Ramcharit Manas. Gita Press; Gorakhpur.

Vijigiri Dinesh, Shivraj Kashinath Bembrekar and P. P. Sharma, 2013. Wild Tribal Food Plants of Adilabad District, Andhra Pradesh, India. *International Journal of Pharmaceutical and Biological Sciences Fundamentals*, Vol. 03, Issue 01:30-34.

Watt, G. A. 1889. Dictionary of the Economic Products of India. Calcutta.

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