



EXPLORATION AND DOCUMENTATION OF SOME WILD EDIBLE WEEDS FROM SHRIRAMPUR TEHSIL OF AHMEDNAGAR DISTRICT (M.S.), INDIA.

V.A. Jondhale and S.P. Giri

Post Graduate Department of Botany and Research Centre, Padmashri Vikhe Patil
College of Arts, Science and Commerce A/P. Loni Kd, Tal: Rahata, Dist:

Ahmednagar.413713 (M.S), India.

Email: vrushajondhale84@gmail.com

ABSTRACT:

An extensive ethno-botanical exploration was carried out in the Shrirampur tehsil of Ahmednagar district of Maharashtra state, during year 2019-2020. The main goal behind this extensive exploration was to identify and to document different weed species from this area which are used by local tribes as well as common village people as wild edible vegetables. They are aware of medicinal and nutritive potential of edible weed species. The tribal make use of leaves, flowers, fruits, of weeds as vegetable. From present detail ethno-botanical survey it is revealed that in all 24 weed species belonging to 21 genera and 17 families are significant as wild edible vegetables.

Key words: -Wild edible, Shrirampur, Weeds, Maharashtra.

INTRODUCTION:

India is a biodiverse land and is rich in its flora. Indians have been worshipping nature since vaidic period and perhaps before that. The relationship of Indians and plants is inextricable. People make use of leaves, stem, flowers, fruits, seeds, whole plant to meet their daily requirements of food. Wild plants are used by aborigines as food, herbal medicines and they possess great knowledge of indigenous and wild plants.

A weed is an undesired plant growing in cultivated crops and competing with them for light, water, and nutrients. A weed is generally an unwanted organism which thrives in habitats disturbed by man (Harlan and Dewet 1965). A plant is therefore a weed either because it interferes with human activity and/or welfare or because it occurs spontaneously in human disturbed habitats (Akobundu 1987). These definitions focus on bad virtues of weeds, though they have

positive side too. Weeds are used by indigenous communities as wild edible resources as they are available and affordable. They are aware about nutritive and medicinal potential of wild edible weeds. The potential utility of edible wild weeds has long been ignored by agriculture interventions and gardening enthusiasts alike which may nature's finest nutrition supplements packed with iron, calcium, vitamins, antioxidants, fibers, and can include as a healthy balanced diet as indigenous super foods (Powar and Shirole et.al 2019). World's population is growing day by day and is almost impossible to fulfill food and nutrition requirement of such ever-growing population through agriculture. Hybrid and exotic varieties of plants are much popular among urban people, though they fulfill stomach but leave hidden hunger of nutrients and trace elements such as zinc, copper, selenium, chromium, cobalt, iodine, manganese and molybdenum. Wild

edible plants /weeds are good source of nutrients and provide disease resistance, keeping this in view present investigation has been undertaken to explore and document wild edible weeds used by rural and tribal people as food resources.

Many researchers have great contribution as far as botanical as well as exploration of plants/weeds as edible food resources is concern in this region such as, Mulay (2012), Auti et.al (2004), Salve et. al (2012), Aher (2015), Khyade et.al (2009), Hooker (1897), Cook (1958), Shirke (1983). Pradhan and Singh (1999), though the present work is first ever attempt to explore and document wild edible weeds of Shrirampur tehsil.

Study Area:

Shrirampur is one of the significant tehsil of Ahmednagar district of Maharashtra state (India). It comprises about 54 villages occupying 569.87 sq kms of area. The tehsil is irrigated with water from 'Bhandardara' dam. Major rivers flowing through tehsil are Godavari and Pravara. Shrirampur tehsil lies between 19° 36' 53. 64" N To 74° 4' 32" E Bhill, Pardhi, Koli are the major tribes residing in this area.

MATERIALS AND METHODS:

The present study was completed by extensive ethno-botanical survey in study area. The information is collected by taking interviews of villagers, rural elder women, local healers, local vegetable vendors, and local vegetable gatherers. Local tribe such as Bhill, Koli, and Pardhi were also interviewed. A systematic questionnaire was prepared for interview purpose in order to have accurate and faithful information regarding wild edible weeds.

The study area was visited in regular time intervals during 2019-2020, especially in

monsoon season. Local vegetable markets were frequently visited for collection of reliable data. Data was collected regarding processing and preparation of recipes of wild edible weed species.

Weed species were collected and are preserved in herbarium by using standard technique. (Jain and Rao, (1967). Photographs of weeds from agricultural fields and follow land were captured by using Nikon D5300 DSLR camera. The weed specimens were identified taxonomically with the help of available floras. (Singh et.al 2001), Pradhan and Singh (1999), Cook (1958), Cook (1967), Flora of Maharashtra Dicotyledons Vol. I- Singh and Kartikeyan (2000), Flora of Maharashtra Dicotyledons Vol. II by Singh *et. al* (2001), V.N Naik (1998) .

RESULT AND DISCUSSION:

From the detail survey and documentation, it is revealed that 24 weed species belonging to 21 genera and 17 families of angiosperms are notable as wild edibles. Among them 1 family belongs to monocot and 16 belongs to dicot. Among these 24 weed species 18 are herbs, 3 are climbers, 2 are shrubs and 1 is tree.

List of weed species used as wild edibles is alphabetically prepared giving detail description of each species including botanical name, vernacular name, family, and habit and plant part used for consumption in table no.1

From the table no.2 it has been found that leaves and stems in twenty two plants (91.66 %). Fruits in only one plant (4.16%) and flowers in only one plant (4.16%) found to be used as vegetables. From table no.3 it has been found that eighteen plants are herb (75%) two is shrub (8.33%). Three are climber (12.5%) and one is tree (4.16%).

CONCLUSION:

It is transpired from the detail study that rural and tribal people of the study area have great traditional knowledge and wisdom regarding identification, conservation, and processing of wild edible weeds. They are aware of poisonous parts associated with edible parts, process to separate harmful parts from edible one and processing of raw parts before actual consumption. As these people belongs to economical weaker section of society they use wild plants for consumption, it ties them close to nature as these food resources are reachable and affordable.

From the study it can be concluded that as this knowledge is with elderly rural and tribal people it is under threat of getting vanish due to lack of communication with them and negligence. Systematic efforts should be done to popularize and materialize these food resources as urban people have ignorance about indigenous food and attraction for hybrid and exotic food. Population and diversity of wild edible weeds is also greatly reduced because of mining, construction activities, over use of weedicides, so it can be concluded that there is great need to bring these wild edibles under agronomic cultivation and to exploit them commercially.

Funds should be provided to rural and tribal people for conservation, cultivation and commercial exploitation so it will help in economical upliftment of poor rural families.

Following are some edible weeds which need to pay attention for conservation, cultivation and commercial exploitation of recipes made from them.

1. *Argyreia nervosa* (Burm.f) Bojer. Locally known as 'Samudra shok' and *Wattakaka*

volubilis (L.F) Staff, locally known as 'Harandodi'. The study highlights the conservation of these two species as their population is greatly reduced in study area.

2. *Chenopodium album* L. locally known as 'Chill'. Tender leaves and stem of this weed are boiled in water then squeezed and mixed with Jowar or Bajara flour and a 'Bhakari' is made out of it by local 'Bhill' tribe people which is very tasty and high in nutrition.

3. *Capparis decidua* (Forssk) Edgew. Locally known as 'Kiral' this is a weed of follow land. Fruits of this weed are used to prepare pickle by local people.

The study highlights towards commercial exploitation of these recipes made from wild edibles.-

REFERENCES:

- Aher, S.K (2015): Weed diversity and their ethnobotanical uses in the Parner Tehsil, District. Ahmednagar, Maharashtra, (India). Indian Journal of Fundamental and Applied Life Sciences, vol. 5(4):Pp128-135.
- Akobundu I.O(1987): Weed science in the Tropics Principles and Practices. John Wiley and Sons, New York: Pp. 522.
- Auti, B.K., Pingale S.D. and Aher R.K. (2004): Survey of Weeds and their medicinal value from Shrirampur Tehsil, Ahemednagar, district (M.S). Advances in plant sciences 17(II):Pp. 395-401.
- Cook T(1958): Flora of Presidency of Bombay, Reproduce ed. Botanical Survey of India, Calcutta, India. Vol. 1 to 3.

- Cook T(1967): Flora of Presidency of Bombay, Botanical Survey of India, Calcutta, India. Vol 1 to 3.
- Harlan J.R. and Dewet J.M.J. (1965): Some thoughts about seeds. Economic Botany,19: Pp16-24
- Hooker J.D(1872-1897): The Flora of British India London, Vol. 1 to 7.
- Jain S.K and Rao R.R(1967): A handbook of field and Herbarium methods today and Tomorrow Printers and Publishers, New Delhi.
- Khyade M., Kolhe S., and Deshmukh B. (2009): Wild edible plants used by the tribes of Akole Tehsil, of Ahmednagar District, (MS), India. Ethnobotleaflet.13:Pp.1328-1336.
- Malay J.R(2013) Weeds from Ahmednagar district and their utilization aspects, Ph.D. thesis submitted to BAMU Aurangabad.
- Naik V.N(1998): Flora of Marathwada vol (1&2), Amrut prakashan, Aurangabad.
- Powar P.V., Shirole D.S., Vishvakarma S.R., and Vishwad A.A. (2019): Exploration of some potential nutritive wild edible weeds of Aurangabad District, Maharashtra, India. International Journal of Innovative Science and Research Technology. Vol4 (10):Pp360-366.
- Pradhan S.G. and Singh N.P(1999): Flora of Ahmednagar District, Maharashtra. Bishen Singh, Mahendra Pal Singh, Dehradun.
- Salve A. and Gopal R. (2012): Some less known wild vegetables from The Garbhagiri Hills in Ahmednagar District, (M.S), India. Journal of Pharmaceutical Research and Opinion 2:1: Pp 9-11.
- Shrike D.R(1983): The study of the flora of Ahmednagar, Journal of university of Poona science and Technology. 56:Pp55-70.
- Singh N.P and Karthikeyan S. (2000): Flora of Maharashtra state Dicotyledons, Vol. (I), Botanical Survey of India, Kolkata.
- Singh N.P., Karthikeyan S. and Parana P.V(2001): Flora of Maharashtra state Dicotyledons, Vol. (II), and Botanical Survey of India.

Table No.1 Weed species used as wild edibles in Shirampur Tehsil.







Sr. No.	Botanical Name	Common name / Vernacular name	Habit	Family	Plant part used
1.	<i>Acacia nilotica</i> (L)Wild	Babhul	Tree	Mimosaceae	Tender leaves and pods
2.	<i>Achyranthes aspera</i> L.	Aghada	Herb	Amaranthaceae	Tender leaves
3.	<i>Antipllex hortensis</i> L.	Chandan batwa	Herb	Chinopodiaceae	Tender stem and leaves
4.	<i>Amaranthus tricolor</i> L.	Lalmath	Herb	Amaranthaceae	Tender stem and leaves
5.	<i>Amaranthus viridis</i> L.	Tandulja	Herb	Amaranthaceae	Tender stem and leaves
6.	<i>Argyreia nervosa</i> (Burm.F.) Bojer	Samudrashok Samudravel	Climber	Convolvulaceae	Leaves
7.	<i>Boerhavia diffusa</i> L.	Ghetuli	Herb	Nyctaginaceae	Tender leaves
8.	<i>Boerhavia erecta</i> L.	Punarnava	Herb	Nyctaginaceae	Tender leaves
9.	<i>Capparis decidua</i> (Forssk) Edgew	Kiral	Straggling shrub	Capparaceae	Fruits
10.	<i>Cardiospermum helicacabum</i> L.	Kapalphodi	Climbing Herb	Sapindaceae	Leaves
11.	<i>Cassia tora</i> L.	Takla	Herb	Fabaceae	Tender leaves
12.	<i>Celosia argentea</i> L.	Kombada	Herb	Amaranthaceae	Tender leaves
13.	<i>Chenopodium album</i> L.	Chill	Herb	Chinopodiaceae	Tender stem and leaves
14.	<i>Commelina benghalensis</i> L.	Kena	Herb	Commelinaceae	Tender leaves
15.	<i>Digera muricata</i> L. Mert	Kunjiricha	Herb	Amaranthaceae	Tender stem and leaves
16.	<i>Launaea procumbens</i> (Roxb)	Pathari	Herb	Asteraceae	Tender stem and leaves
17.	<i>Momordica balsamina</i> L.	Rankarle	Climber	Cucurbitaceae	Fruits
18.	<i>Oxalis corniculata</i> L.	Ambushi	Herb	Oxalidaceae	Tender leaves
19.	<i>Phyllanthus amarus</i> Schum and Thonn.	Bhuiavala	Herb	Euphorbiaceae	Tender leaves
20.	<i>Portulaca oleracea</i> L.	Ghol	Herb	Portulacaceae	Tender leaves
21.	<i>Portulaca quadrifida</i> L.	Chighal	Herb	Portulacaceae	Tender leaves
22.	<i>Tinospora cordifolia</i> DC.	Gulvel	Climber	Menispermaceae	Tender leaves
23.	<i>Tribulus terrestris</i> L.	Sarata	Herb	Zygophyllaceae	Tender leaves
24.	<i>Wattakaka volubilis</i> (L.F) Staf	Harandodi	Climbing shrub	Asclepiadaceae	Flowers

Table. No 2.Part used in number of weed species.

Part used	Flower	Fruit	Tender leaves and stem
No. of weed species	1	1	22
% of weed species	4.16%	4.16%	91.66

Table No.3 Habit wise distribution of number weeds species.

Habit of weed	Herb	Shrub	Climber	Tree
No of weed species	18	2	3	1
% of weed species	75%	8.33%	12.5%	4.16%

	
1. <i>Cassia tora</i> .L	2. <i>Momordica balsamina</i> L.
	
3. <i>Capparis decidua</i> (Forssk) Edgew	4. <i>Digeria muricata</i> (L) Mert.
	
5. <i>Celosia argentea</i> . L.	6. <i>Wattakaka volubilis</i> (L.f.) Staf
Photographs of Some wild edible weeds of Shrirampur Tehsil.	