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## **WILD FOOD RESOURCES AT TADоба ANDHARI TIGER RESERVE IN CHANDRPUR DISTRICT OF MAHARASHTRA, INDIA**

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### **ABSTRACT**

Tadoba Andhari reserve is largest national park of Maharashtra. It was declared as a tiger reserve in 1995 and renowned for its tiger and bamboo forest. It has 625.45 square kilometre protected area. Around 59 villages exist in the nearby buffer area of tiger reserve, and some of them are connected to core area. People of these villages are directly or indirectly dependent on forest resources for their day to day needs. They use some resources, which includes wild edible plants for food as well as fodder. Present document is based on collection of traditionally consumed food resources. The data has been generated from shepherd, women and villagers from Karwa village of Tadoba Andhari tiger reserve. Major tribal population in village is Gond that depends on wild food. These people are consuming more than 25 species of plants, which are seasonally available. Wild foods are nutritious and provide medicine, especially for pregnant women and children. Information regarding preparation of food has been collected from the women. The traditional food includes, 4 tubers, 7 climber's species, 2 aquatic plants species, 10 terrestrial plant species, one species of mushroom and one newly raise bamboo.

**Keyword:** *Forest Wild Food Resources, Gond Tribes*

### **INTRODUCTION**

There are 427 tribes residing in forest or hilly regions of India. Maharashtra state harbours 47 tribal communities of which Bhil, Mahadeokoli, Gond, Warali, Korku; Andh, etc. Gond, Gavari, Koli and Dhivar are main tribes in Chandrapur district. Some of them are absolutely ignore or ill- literate about their surrounding cities, taluks places within the Maharashtra. Despite many threats to their way of lives, these communities' loyalty to their cultural roots and food traditions remains intact.

The wild food plants play a significant role in human life. They provide essential nutrient, vitamins, minerals which are most vital part of wild food (Kulkarni *et al.*, 2003; Deshpande and Kulkarni, 2015). Such kind of wild food is essential for human life as well as for animals. Leaves of wild species are among the most widely consumed. Besides leaves, they consume fruits, corms, shoots, seeds and young stem of plants.

Earlier literature gives information that more than 32, 83,000 species of plants are documented at worldwide. Among them 2, 86,000 are angiosperm. Nearly 7,000 plant species are cultivated or grown naturally in their forest habitat. Indian tribes consume more than 1530 plants species for food in day to day life. Out of them 145 are tubers, 521 green vegetables, 101 flower species, 647 fruits and 118 are seed and dry fruits species. Out of which only 30 species of plants are domesticated.

People living near forest area, get seasonally available wild food resources. In this connection Vartak and Kulkarni (1986) documented monsoon season wild edible plants from Western Maharashtra. Deshpande *et al.*, (2015) collected information from Deolapar region and Rajgond tribe consume more than 72 plant resources from forest.

Bhogaokar and Marathe (2010) surveyed wild edible plants from Melghat forest reserves. It is observed that communities living in the region of protected forest areas get enrich quantity of wild food for entire year. On the border of protected areas villagers get several wild edible plants consist edible parts in the form of tubers, climbers, flower, leaves, seed and roots.

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It has been observed that traditional knowledge of wild food is a sharply declining due to rapid depletion of forest cover. There is need to educate the younger generation about their importance this knowledge may loss forever.

In present survey, documented 25 wild plants species with the help of native shepherd and villagers, Major participant are women's preparing recipes of wild plants. One important thing was observed that some of wilds plants are having traditionally great value in tribal cultural because of their importance in specific festivals. For example, some wild plants preferably eat in those specific days, such as Bullock festival. The young childrens of village are very well familiar with the occurrence of wild edible fruit plants and its importance, as it inherits from their traditional culture which is definitely better for long association with nature (Kulkarni and Kumbhojkar, 1992). Chothe *et al.*, (2014) has developed preservation of techniques of wild fruits by preparing products. Kulkarni *et al.*, documented and analysed wild fruit *Flacourtia* from Western Maharashtra. Ghate *et al.*, conducted survey of *Carissa* from Western Maharashtra. Role of wild food plants playing major role in consumption, availability in tribal pockets (Jadhve *et al.*, 2015). Exploration of wild food resources are benefited to tribal community of Tadoba Andhari tiger reserve.

The present study includes, documentation, occurrence and to create awareness for their habitat conservation. It will also help in biodiversity conservation of Tadoba Andhari tiger reserve in Chandrpur districts.

### MATERIALS AND METHODS

The study was conducted during 2012-2014 in Tadoba Andhari tiger reserve. Both qualitative and quantitative data were collected from primary and secondary sources in different seasons of the year. The area is situated in Chandrpur district of Maharashtra and very famous for wild tigers (*Panthera tigris*) and Bamboo (*Bambusa arundinacea*). The tiger reserve divided into two major areas, i.e., core and buffer. The core area is spread over 625.4 sq.km and considered as a critical tiger habitat zone whereas, buffer zone consists of about 1101.77 sq.km area. It contains 59 villages, out of which some villages are directly connected to the boundary of core area. Karwa tribal village is one of them, consist *Gond* and *koli* as main tribes. They depend upon the forest produce for their basic needs as well as livelihood activities such as timber-wood, bamboo, fodder and food. The aim of the study was to explore, collect, identify and preserve the wild plants species used by the communities. The data were collected from the tribal's through a questionnaire. The paper reports wild food resource used by the tribal's of the Karwa village of Tadoba Andhari tiger reserve (Table 1).

The given region was surveyed in various stages.

1. Region was geographically explored with help of native people of Villagers of Tadoba.
2. The documentation started with preparation of questioners.
3. Interaction and conversation with people, such as shepherd, old, young men's and women's.
4. Study expedition with the shepherd in reserved area, to get important information on wild food, description of plants species, useful, edible parts and methods of preparation.
5. Practically food was prepared several times in the native tribe's home and documented the whole process accordingly. Furthermore, native name of recipe was also recorded.
6. Scientific names and identification were carried out using relevant books and scientific literature (Bachulkar, 2012; Patil, 2010; Reddy, 2011).

### RESULTS AND DISCUSSION

Most of the tribal communities has good knowledge of edible plants available in surrounding forest and know how to eat the edible part and discard the other parts. This traditional knowledge of consuming wild plats is passed on orally from one generation to another and need to be safeguarded. Thus wild edible plants can act as a link between habitat, season of availability, local people and culture associated with tribal people (Patil *et al.*, 2015).

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Protected area of Tadoba Andhari tiger reserve have 25 plants species documented with the help of tribal's who's live on border. It mainly includes tubers, leaves, flowers, bamboo shoots, pods, fruits, roots. These 25 plants species cooked by several types for the meal such as, 17 Plants are consumed as dried vegetable, 3 curry, 3 spicy round cake, 2 boiled, 1fried, 2 raw, 1dal fry, 2 Chapatti, 2 *Bhujiya*, and 1 bar.

It is reveal that wild plants have a profound influence on them. The tribal were well-acquainted with the food resources of surrounding forests, and knew what to eat and how to separate harmful substances from the edible items. For making the food they mixed up with other plants such pear and tamarind. For cooking spicy round cake, plants leave mix in rice flour and also make Chapatti. Out of them only 2 plants species are available in near local markets which are away from Karwa at least 10km. One is *Amorphophallus paeonifolius* and *Momordica dioica*.

Out of 25 plants species 14 plants are used for medicine purposes, like diabetes, stomach disorder, cough, piles, arthritis, worm, etc. some plant useful for pregnant women and children. Different dishes prepared by them having medicinal properties. Considering the above factors, the documentation of wild food resources is urgent need of researchers before it is vanishing from the habitat. Ethno biological exploration of various tribal areas may reveal that many wild plants prove to be a cure for thirst or hunger depression problems in humans. The wild populations of many wild species have been depleted due to destructive harvesting and overexploitation. There is much scope for improving the growth forms of wild food resources by using modern agronomic research, experimental cytogenetic studies for future food security (Kulkarni, 2005).

Plants local name, scientific name, family, part used, preparation of recipes, medicinal uses are recorded in following table:

**Table 1: Wild Food species consumed by tribal communities**

Sr.	Scientific name	Family	Local Name	Part use	Ways of Preparation	Medicine other important
1	<i>Dioscorea bulbifera</i> L. (Willd type)	<i>Dioscoreaceae</i>	Ranmata ru	Tuber	Boiled	It useful for diabetic patient.
2	<i>Dioscorea bulbifera</i> Linn.(Cultivated)	<i>Dioscoreaceae</i>	Gavthi Matharu	Tuber	Boiled or Fried	Cure of pregnant women, stomach.
3	<i>Amorphophallus paeonifolius</i> (Densst) Nicols.	<i>Araceae</i>	Suran	Tuber	Dry Vegetable dish and curry	Used as medicine.
4	<i>Zingiber cernuum</i> Dalz.	<i>Zingiberaceae</i>	Ranaal	Tuber	Chappati	Used as medicine
5	<i>Pergularia daemia</i> (Forssk.) Chiov.	<i>Asclepiadaceae</i>	Utaran	flower	Dry Vegetable dish	Cough, injury, Cure of pregnant women.
6	<i>Leea macrophylla</i> Roxb ex Hornem	<i>Ampelidaceae</i>	Dheman i	Flower	Dry Vegetable dish	Not applicable
7	<i>Commelina benghalensis</i> L.	<i>Commelinaceae</i>	Kena	Stem, leaves	Spicy round cake, dry Vegetable dish, curry	Not applicable
8	<i>Capparis zeylenica</i> L.	<i>Cappariseae</i>	Waghote (Wagnk)	Fruit	Dry Vegetable dish	Not applicable

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9	<i>Celastrus paniculatus</i> Willd.	<i>Celastraceae</i>	haya) Malkom ani	Flower	Dry Vegetable dish	Not applicable
10	<i>Basella alba</i> L.	<i>Basellaceae</i>	Bhasel panwel	Leaves, kanda	<i>Bhujiya</i> , Spicy round cake,	Cure of pregnant women, Veterinary use
11	<i>Momordica dioica</i> Roxb. Willd.	<i>Cucurbitaceae</i>	Katwal	Fruit-katwal	Dry Vegetable dish	Diabetics
12	<i>Cassia tora</i> L.	<i>Caesalpinaceae</i>	Tarota	Young leaves	Dry Vegetable dish	Piles, Veterinary use
13	<i>Celosia argentea</i> L.	<i>Amaranthaceae</i>	Kobada (Kukura da)	Leaves	Dry Vegetable dish	It uses on piles.
14	<i>Gardenia gummifera</i> L.f.	<i>Rubiaceae</i>	Kulmul	Fruits	Eaten raw	Not applicable
15	<i>Maytenus senegalensis</i> (Lam) Excell.	<i>Celastraceae</i>	Bharati	Leaves	Dry Vegetable dish	Cough, Arthritis
16	<i>Tamilanadia uliginosa</i> (Retz.) Triveng.& Sastr	<i>Rubiaceae</i>	Kala Pethara	Flower	Dry Vegetable dish	Bitter bark
17	<i>Catunaregam spinosa</i> (Thunb.) Tirveng.	<i>Rublaceae</i>	Pandhara pethara	Fruit	Dry Vegetable dish	Used in treatment of domestic animals stomach
18	<i>Holarrhena pubescens</i> (Buch-Ham) Wall.ex G.Don.	<i>Apocynaceae</i>	Padhara kuda	pod, Flower	Curry and dry Vegetable dish	Worm, dysentery,
19	<i>Amaranthus cruentus</i> L	<i>Amaranthaceae</i>	Rajgira	Leaves	Dry Vegetable dish	Not applicable
20	<i>Ammannia baccifera</i> Linn.	<i>Lythraceae</i>	Dhan bhaji	Leaves, flower, kadi	Dal fry, dry Vegetable dish	Not applicable
21	<i>Colocasia esculenta</i> L	<i>araceae</i>	Rankoch ai	Whole plants	Bar mixed with Curry	Medicinal use
22	<i>Nelumbo nucifera</i> Gaernt	<i>Nelumboaceae</i>	Kanda	Fruits	Eaten Raw	Not applicable
23	<i>Cryptocoryne retrospiralis</i> (Roxb.) Kunth	<i>Araceae</i>	Pakanwe l	Leaves	Chappati	Medicine
24	<i>Agaricus bisporus</i> (J.E.Lange) Imbach.	<i>Agaricaceae</i>	Tekode	Mush room	Dry Vegetable dish	Not applicable
25	<i>Bambusa arundinacea</i> (Retz.) Willd	<i>Poaceae</i>	Washte	Washte	Spicy round cake, dry Vegetable dish	Not applicable

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**Figure 1-18: Photos of Some Wild Food Plants**



**Figure 1: *Dioscorea bulbifera* L (Wild type)**



**Figure 2: *Amorphophallus paeonifolius* (Densst) Nicols**



**Figure 3: *Dioscorea bulbifera* Linn (Cultivated)**



**Figure 4: *Zingiber cernuum* Dalz.**



**Figure 5: *Pergularia daemia* (Forssk.) Chiov**



**Figure 6: *Leea macrophylla* Roxb ex Hornem**

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**Figure 7: *Commelina benghalensis* L.**



**Figure 8: *Capparis zeylenica***



**Figure 9: *Celastrus paniculatus* Willd**



**Figure 10: *Cassia tora* L**



**Figure 11: *Celosia argentea* L.**



**Figure 12: *Holarrhena pubescens***



**Figure 13: *Ammannia baccifera* Linn.**



**Figure 14: *Gardenia gummifera* L.f.**

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**Figure 15: *Tamildadia uliginosa* (Retz.)**  
Triveng. & Sastr



**Figure 16: *Maytenus emarginata* (Lam) Excell**



**Figure 17: *Nelumbo nucifera* Gaernt**



**Figure 18: *Bambusa arundinacea* (Retz.) Willd**

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