



Some Wild Edible Fruits of Tripura- A Survey

KEYWORDS

Wild edible fruits, Genetic resources, Sustainable development

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ABSTRACT A survey was conducted with a view to document wild edible fruits of Tripura during 2011 to 2013. Field study was carried out in the Baramura hill range, Athramura hill range, Longtorai hill range, Debatamura hill range, Sakan hill range and Jampui hill range of Tripura. The state weather is characterized by subtropical, warm and humid condition which favours the growth and development of various edible fruit crops. A total of 61 wild edible fruit plants were documented. These fruit plants are playing a vital role in providing nutritional and economic security. This paper lists the wild edible fruits & their uses and suggests collection, evaluation, conservation and utilization for sustainable development.

Introduction

Wild fruits were an important source of food for mankind before the dawn of civilization and the domestication of the present day fruits. Cavemen in the forests were dependent on these fruits and passed on valuable information on the utility and choice of wild species of fruits from generation to generation. These wild fruits have played a very vital role in supplementing the diet of the people. Recently, the use of wild fruits as a food has decreased due to availability of improved commercially cultivated fruit plants. Few people in rural areas still use them extensively as a supplement to their basic food requirement. Some are preserved for use during periods of food scarcity. They are sometimes sold in the urban market. Although the popularity of these wild forms of fruits has declined which has led to the threat of the extinction yet they are very rich source of some rare traits and special attention should be given in order to maintain its diversity. Tripura is located at 22°56' to 24°32' latitude and 91°10' to 92°21' longitude. The state weather is characterized by warm and humid subtropical climate with three distinct seasons, viz. summer, monsoon and winter. Tripura receives an average rainfall of 2065mm. the monsoon breaks in May-June and continues for about 4-5 months. The geographical area of Tripura is about 10,491 sq km of which 60 per cent is covered with forest and remaining 40 per cent is available for cultivation. Agriculture is an important sector in the state, which contributes 26 per cent of the state GDP of which the major contribution is from horticultural crops viz. Fruits, Vegetables, plantation Crops, Spices etc. More than 75 per cent of the population either directly or indirectly depends on agriculture. The small and marginal farmers contribute about 90 per cent of total farming community. The agro climatic conditions, fertile soils and good amount of rainfall favours the existence of large number of fruit crops in this region. There is a huge genetic diversity which should be trapped, conserved and utilized for sustainable development. The standardization of agro technique is essential for their profitable cultivation and maximum yield realization. Keeping all above points in view a survey was conducted in all the eight districts of Tripura to document the genetic resources of wild edible fruits.

Materials and methods:

Tripura is a landlocked hilly State. Tribal's account 31% of population of the State's total population. There are 19

ethnic groups viz. Tripuri, Jamatia, Reang, Noatia, Chakma, Bhil, Bhutia, Chaimal, Garo, Halam, Khasia, Kuki, Lepcha, Lushai, Mag, Munda, Orang, Santhal and Uchai residing in the State. Tripura is rich with floristic diversity and falls under the biogeographic zone of North East B hills. The flora comprises 379 tree species, 320 shrubs, 581 herbs 165 climbers, 16 climbing shrubs, 35 ferns and 45 epiphytes. The present study was carried out in the Baramura hill range, Athramura hill range, Longtorai hill range, Debatamura hill range, Sakan hill range and jampui hill range of Tripura. The villages where the survey was conducted included Belphang Bari, Twishikam, Kami, Gantha Rung Para, Barduwal Kami, Khamthing Para, Kelreng, Krishnahai Para, Bikram Malsom Para, Debthang Para, Sirtok Para, Mungia kami, Manu, Hampui, Betlingshib, Bishalgarh, Bishramganj, Udaipur, Sabroom, Belonia etc. Plant specimens identified during the field visits were cross checked against different informants to validate the information. The collected plants and data entries were noted by respective collection number. Species identification was confirmed by Flora of Tripura State¹⁻⁸.

Result and Discussion

A total of 61 wild fruit plants were identified. The detailed information regarding scientific name, common name, family and habit for future reference and study (Table 1). Of the total 1 species belonged to herbs, 12 species to shrub, 45 to trees and 3 to climbers. It is found that all the enumerated plant species are very commonly used by the tribal population. Some of them are found to be cultivated in kitchen garden by certain rural communities for their daily need and uses. The species recorded in present study are found promising role as a dietary supplement in the food habits of the tribal and other ethnic communities. Out of these edible plants 8 species each belonged to family Moraceae and Phyllanthaceae, 7 to Rosaceae, 4 to Myrtaceae, 2 species each belong to Anonaceae, Arecaceae, Dilleniaceae, Elaeocarpaceae, Salicaceae, Rhamnaceae, Malvaceae & Vitaceae and 1 species each belonged to Apocynaceae, Rutaceae, Sapotaceae, Passifloraceae, Solanaceae, Anacardiaceae, Caesalpinaceae, Cornaceae, Ulmaceae, Oxalidaceae, Euphorbiaceae, Fagaceae, Rubiaceae, Sapotaceae, Clusiaceae, fabaceae, bursaceae & capraceae.

Table -1. List of wild edible fruits of Tripura

Sl. No	Botanical name	Family	Local name@	Habit	Remarks
1.	<i>Annona reticulata</i> L.	Annonaceae	C –Custard apple B-Ata phal H- Ramphal	Tree	Ripe and unripe fruit is edible.
2.	<i>Annona squamosa</i> L.	Annonaceae	C –Custard apple / Sugar apple B-Sita phal H- Sharifa	Tree	Fruits are edible, roots and seeds are medicinal.
3.	<i>Artocarpus chalpasha</i> Roxb.	Moraceae	B –Chamal	Tree	Fruit is also medicinal.
4.	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	B- Khatal	Tree	Unripe fruits are used in pickles and ripe fruits edible. Seeds used in vegetables.
5.	<i>Baccaurea ramiflora</i> Lour.	Phyllanthaceae	B - Lot-kon / Bubi	Tree	Fruit is also used as medicinal.
6.	<i>Borassus flabellifer</i> L.	Arecaceae	C –Palmayra palm B -Taal H- Tar	Tree	Sap drink as palm wine. Ripe fruits and seed are edible. Leaves used in making hand fan.
7.	<i>Carissa carandas</i> L.	Apocynaceae	C, H - Karonda B -Karamcha	Shrub	Unripe fruit is used as vegetables and pickles.
8.	<i>Citrus maxima</i> Merr.	Rutaceae	B-Jambura	Tree	Fruit used in pickles, salad and drinks.
9.	<i>Dillenia indica</i> L.	Dilleniaceae	B-Chalta	Tree	Unripe fruits are used in pickles and ripe fruits edible used in pickles
10.	<i>Elaeocarpus floribundus</i> Blume	Elaeocarpaceae	B –Jalpai	Tree	Unripe fruits are used in pickles and ripe fruits edible.
11.	<i>Eriobotrya japonica</i> (Thunb.) Lindl.	Rosaceae	C, H- Loquat	Tree	Fruit is also used as medicinal.
12.	<i>Ficus carica</i> L.	Moraceae	C -Fig H-Goolar	Tree	Fruit is also used as medicinal.
13.	<i>Ficus hispida</i> L.	Moraceae	B -Dumur dhaugri	Tree	Fruit is edible.
14.	<i>Flacourtia jangomas</i> (Lour.) Raeusch.	Salicaceae	B-Tekroi	Tree	Fruit is also used as medicinal.
15.	<i>Manilkara zapota</i> (L.) P.Royen Syn – <i>Manilkara achras</i> (Mill.) Fosberg	Sapotaceae	C –Sapodilla B –Khirmi / Sofeda H –Chiku	Tree	Fruit is also used as medicinal.
16.	<i>Morus australis</i> Poir.	Moraceae	C-Mulberry B -Tut H –Shahtut	Tree	Ripe fruit is eaten.
17.	<i>Passiflora edulis</i> Sims,	Passifloraceae	C, B -Passion fruit	Climber	Juicy Fruits are edible and leaves are used in vegetables.
18.	<i>Phoenix humilis</i> Royle.	Arecaceae	C- Date Palm H- Khajur B- Khejur	Tree	Sap is used as palm wine. Ripe fruits are edible and used in jaggery
19.	<i>Phyllanthus acidus</i> (L.) Skeels	Phyllanthaceae	B-Hor bori	Tree	Unripe fruits are used in pickles and medicine.
20.	<i>Physalis minima</i> L	Solanaceae	B -Batepari	Herb	Fruit is also used as medicinal.
21.	<i>Prunus domestica</i> L.	Rosaceae	C -Plum	Tree	Ripe fruits are used in pickles
22.	<i>Prunus persica</i> (L.) Stokes	Rosaceae	C -Peach	Tree	Fruit is also used as medicinal.
23.	<i>Rubus ellipticus</i> Sm.	Rosaceae	C –Raspberry	Shrub	Fruit is also used as medicinal.
24.	<i>Spondias dulcis</i> L.	Anacardiaceae	B -Amra	Tree	Unripe fruits are used in pickles
25.	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	C- Black Plum H- Jamun B- Kala jam	Tree	Ripe fruit is eaten. Seeds are useful in controlling diabetes.
26.	<i>Syzygium jambos</i> (L.) Alston	Myrtaceae	C- Rose apple H- Gulab jamun B- Golap jam	Tree	Ripe fruit is eaten. Seeds are useful in controlling diabetes.

27.	<i>Tamarindus indica</i> L.	Caesalpiniaceae	C- Tamarind H- Imlee B- Tetul	Tree	Ripe fruits are used in pickles.
28.	<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	C,H -Ber B -Boroi	Tree	Ripe fruits are eaten. Dried fruits are used in pickles.
29.	<i>Ziziphus oenoplia</i> (L.) Mill.	Rhamnaceae	B -Siakul	Tree	Ripe fruit is eaten.
30.	<i>Alangium salviifolium</i> (L.f.) Wangerin	Cornaceae	B -Ankura /bagh ankura	Shrub	Fruit is also used as a medicinal.
31.	<i>Antidesma acidum</i> Retz.	Phyllanthaceae	B -Bignay	Tree	Fruit is also used as a medicinal.
32.	<i>Antidesma bunius</i> (L.) Spreng.	Phyllanthaceae	K -Malung renu B-Karanda	Tree	Ripe fruits are used in pickles.
33.	<i>Antidesma ghaesembilla</i> Muell. Arg.	Phyllanthaceae	B -Elena / khudi jam	Tree	Fruit is also used as a medicinal.
34.	<i>Antidesma montanum</i> Blume	Phyllanthaceae	B -Sialbuka	Tree	Fruit is also used as a medicinal.
35.	<i>Aphananthe cuspidata</i> (Blume) Planch	Ulmaceae	-	Tree	Fruit is also used as a medicinal.
36.	<i>Artocarpus lacucha</i> Buch.-Ham.	Moraceae	C -Monkey jack H- Barhal / Lakoocha B- Dhemphal	Tree	Fruit is also used as a medicinal.
37.	<i>Averrhoa bilimbi</i> L.	Oxalidaceae	B -Bilimbi	Tree	Fruit is also used as a medicinal.
38.	<i>Bridelia retusa</i> Spreng.	Phyllanthaceae	B -Kumkumi	Tree	Fruit is also used as a medicinal.
39.	<i>Bridelia stipularis</i> (L.)Bl.Bijdr.	Euphorbiaceae	B -Kolia lata	Shrub	Fruit is also used as a medicinal.
40.	<i>Castanopsis tribuloides</i> (Sm.) A.DC.	Fagaceae	B -Bara hingari	Tree	Fruit is also used as a medicinal.
41.	<i>Catunaregam spinosa</i> (Thunb.) Tirveng.	Rubiaceae	B -Mon-kanta	Tree	Fruit is also used as a medicinal.
42.	<i>Chrysophyllum cainito</i> L.	Sapotaceae	C -Star apple	Tree	Fruit is also used as a medicinal.
43.	<i>Dillenia pentagyna</i> Roxb.	Dilleniaceae	C- Karmal B- Chalta	Tree	Fruit is also used as a medicinal.
44.	<i>Elaeagnus conferta</i> Roxb.	Elaeagnaceae	C -Wild olive	Climbing shrub	Olive oil is extracted from fruit
45.	<i>Ficus oligodon</i> Miq. Ann.	Moraceae	-	Tree	Fruit is also used as a medicinal.
46.	<i>Ficus rumphii</i> Bl.Bijdr.	Moraceae	-	Tree	Fruit is also used as a medicinal.
47.	<i>Flacourtia indica</i> (Burm. f.) Merr.	Salicaceae	B -Boichi /payala	Tree	Fruit is also used as a medicinal.
48.	<i>Flueggea virosa</i> (Roxb.ex Willd.) Royle	Phyllanthaceae	B -Kau kara / shikuri	Shrub	Fruit is also used as a medicinal.
49.	<i>Garcinia pedunculata</i> Roxb. ex Buch.-Ham.	Clusiaceae	B -Baikal	Tree	Fruit is also used as a medicinal.
50.	<i>Grewia sapida</i> Roxb.	Malvaceae	C -Wild phalsa	Tree	Fruit is also used as a medicinal.
51.	<i>Grewia hirsuta</i> Vahl	Malvaceae	C -Wild phalsa	Tree	Fruit is also used as a medicinal.
52.	<i>Millettia pinnata</i> (L.) Panigrahi	Fabaceae	B -Karanja/ pita-garia	Tree	Fruit is also used as a medicinal.
53.	<i>Protium serratum</i> (Wall. ex Colebr.) Engl.	Burseraceae	C -Indian Red Pear	Tree	Fruit is also used as a medicinal.
54.	<i>Rubus moluccanus</i> L.	Rosaceae	C - Molucca bramble	Shrub	Fruit is also used as a medicinal.
55.	<i>Rubus niveus</i> Thunb.	Rosaceae	C -Hill raspberry.	Shrub	Fruit is also used as a medicinal.
56.	<i>Rubus rosifolius</i> Sm.	Rosaceae	C- Roseleaf bramble.	Shrub	Fruit is also used as a medicinal.
57.	<i>Stixis suaveolens</i> (Roxb.)Baill.	Capparaceae	B - Mooni / madhumaliti	Tree	Fruit is also used as a medicinal.
58.	<i>Syzygium nervosum</i> A.Cunn. ex DC. Syn- <i>Syzygium cerasoides</i> (Roxb.) Raizada	Myrtaceae	B -Bhali jum	Tree	Fruit is also used as a medicinal.
59.	<i>Syzygium samarangense</i> (Blume) Merr. & L.M.Perry	Myrtaceae	B -Jamrul	Tree	Fruit is also used as a medicinal.
60.	<i>Tetragium lanceolarium</i> (Roxb.) Planch.	Vitaceae	B - Krishna	Small tree	Fruit is also used as a medicinal.
61.	<i>Tetragium serrulatum</i> (Roxb.) Planch.	Vitaceae	-	Climber	Fruit is also used as a medicinal.

© Common name-C, Bengali name-B, Hindi name-H.

Conclusion:

The finding suggests further investigation on nutritional profile, processing methods, cultivation techniques, and conservation of wild edible fruits of Tripura. In case of fruit crops, only few crops are commercially cultivated. Though there are many wild fruits in the state, there is no proper documentation. Hence emphasis should be given to collection, evaluation, conservation and utilization for sustainable development.

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