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Case Study

Wild edible fruits consumed by people of Upper Assam, NE India

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ABSTRACT

Fruits are rich in fiber, vitamin-C, sugar and water. Fruits are also low in calories therefore, play an important role as weight loss diet and makes man healthy. The wild fruits constitute essential micronutrients, taste and medicinal value. These fruits also serve as staple food in the time of food deficiency. Poor people of the rural areas are also dependent on wild edible fruits as an income source for their livelihood. Therefore, emphasize should be given to explore the wild edible fruits and their popularization and conservation for human welfare. The present study deals with the exploration, documentation and identification of wild edible fruits consumed by people of Upper Assam, North-East India. This paper includes a total of 54 wild edible fruits belonging to 26 families with their local names in Assamese, scientific name, family, time of availability, taste and their uses.

Keywords: Wild edible fruits, Upper Assam, NE India, Medicinal value

INTRODUCTION

Assam state is a mixture of different ethnic communities and tribes. In Upper Assam districts of north eastern regions, the chief inhabitants are Ahom, Moran, Chutia, Kochari, Khamti, Mising, Bodo and Deuri. They are dependent in various natural resources for daily use. They utilize varieties of wild plants as their food in daily diet and medicinal purposes. These wild plants include herbs, trees, and fruits. These are used as vegetables or as fruits. Wild edible fruits are the chief source of vitamins, minerals, sugars and water; therefore, plays an important role in nutrition [1]. Most of these fruits also help as folklore medicine. Wild fruits are mainly consumed by the rural and tribal people of different localities of Assam. The poor people of rural areas also used these plants as income source for their livelihood. Consumption of wild fruits reduces the risk of several diseases like diabetes, cancer, coronary heart disease, neurodegenerative ailment [2]. Earlier, various workers have studied on medicinal and food values of wild plants of traditional knowledge of this region [3, 4, 5, 6]. Due to change in environmental conditions and decrease of forests, most of these plants are now found in rare and some are verge of extinction. Therefore, exploration, documentation, conservation and popularization of these plants are needed for future use. The present study was carried out to documentation and popularization of indigenous wild plant species used by people of upper Assam as fruits.

MATERIALS AND METHODS

The study was undertaken during 2013-2014 in different seasons by conducting field survey in different places of upper Assam. Photographs of all collected wild edible fruits were taken. Questionnaires were done for the collection of data such as local name, time of availability, taste and their mode of uses. The wild fruit plants were identified with the help of local people and referring relevant scientific literatures [7, 8, 9, 10]. The herbariums of collected wild plants were prepared [11]. The wild fruits of the present study areas are arranged alphabetically with their Assamese name, scientific names, family, time of availability, taste and uses as food are shown in **Table I** and photographs of all collected wild fruit plants are also presented in this paper.

RESULTS AND DISCUSSION

In the present study, a total of 54 wild edible fruits consumed by human beings belonging to 26 families have been reported. Most of these wild fruits have very rich nutritive value. Some of them are also have medicinal properties. Majority of them are eaten as raw when ripe, some are taken as

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vegetable and as pickle. In this investigation it was also noticed that, most of the wild fruit plants are trees, some are shrubs and a few are climbers. A total of 32 wild edible fruits belonging to 23 families used by *Bodo* tribe of Kokrajhar district of Assam, NE India were reported earlier [2]. Studies on wild fruits from different areas of Assam, India were also done earlier by other workers [1, 3, 4]. In contrast to others works this paper documented and identified most of the wild fruits that are found in upper Assam districts with their photographs. Due to the lack of popularity and overexploitation of wild areas these plants are decreasing gradually and some are rarely found. To protect and popularize these wild edible fruits awareness should be needed among the people. Further, research on nutritional analysis and their medicinal properties is needed for near future.

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Table I: Detail list of wild edible fruits consumed by people of upper Assam, NE India

	Common name	Scientific name	Family	Time of availability	Taste	Uses
1.	Aasfal/Noga lichu	*Euphoria longan* (Lour.) Steud.	Sapindaceae	June - August	Sweet	Ripen fruits are eaten raw.
2.	Ahom bogori	*Prunus persica* (L.) Stokes	Rosaceae	March - June	Sweet	Ripen fruits are eaten raw.
3.	Amlokhi	*Phyllanthus emblica* L.	Euphorbiaceae	Summer-Autumn	Astringent	Fruits are eaten raw or dry or as pickle.
4.	Amora	*Spondius pinnata* (L. f.) Kurz.	Anacardiaceae	August-October	sweetish sour	Ripen fruits are eaten raw or as pickle.
5.	Bel	*Aegle marmelos* Correa.	Rutaceae	March- June	Sweet	Mature fruits are eaten raw.
6.	Bet	*Calamus tenuis* Roxb.	Aracaceae	April-December	Astringent	Ripen fruits are eaten raw.
7.	Bhumura	*Terminalia bellirica* Roxb.	Combretaceae	December-February	Astringent	Fruits are eaten raw. It is used to prepare 'Trifola'.
8.	Boga Bhet	*Nymphaea nouchali* Burm. f.	Nymphaeaceae	July-August	Sandy	Fruits are eaten raw.
9.	Bogi jamu	*Syzygium jambos* (L.) Alston	Myrtaceae	March- June	Sweet	Ripen fruits are eaten raw.
10.	Bogori	*Zizyphus mauritiana* Lamk.	Rhamnaceae	December - February	Sweetish sour	Fruits are eaten raw or as pickle.
11.	Bohot	*Artocarpus lacucha* Buch.-Ham.	Moraceae	Summer	Sweet	Ripen fruits are eaten raw.
12.	Bokul	*Mimusops elengi* Roxb.	Sapotaceae	February-September	Sandy sweet	Ripen fruits are eaten raw.
13.	Bonpitha	*Chrysophyllum lanceolatum* (Bl.) DC.	Sapotaceae	Winter	Sweet and sticky	Ripen fruits are eaten raw.
14.	Bor thekera	*Garcinia pedunculata* Roxb.	Clusiaceae	May-July	Sour	Ripen fruits are first dried and then eaten with curries or as pickle.
15.	Chuka tenga	*Citrus limonia*	Rutaceae	July- November	Sour	Fruits are eaten raw.
16.	Dimoru	*Ficus racemosa* L.	Moraceae	April-august	Sweet	Ripen fruits are eaten raw.
17.	Geruka tamul	*Chrysalidocarpus lutescens* Wendl.	Arecaceae	March- June	Astringent	Ripen fruits are eaten raw.
18.	Gool nemu	*Citrus limon* (L.) Burm. f.	Rutaceae	May-November	Sour	Fruits are eaten raw or as pickle.
19.	Goru kheech	*Fragaria indica*	Rosaceae	January –April	Sweet	Ripen fruits are eaten

		Andr.				raw.
20.	Hati Bhekuri	*Solanum torvum* Swartz.	Solanaceae	May-November	Bitter	Young fruits are eaten cooked.
21.	Hunaru	*Cassia fistula* L.	Fabaceae	December-February	Sweet	Ripen fruits are eaten raw.
22.	Jolphai	*Elaeocarpus floribundus*	Elaeocarpacea e	October-January	Sour	Fruits are eaten raw or as pickle.
23.	Jora tenga	*Citrus medica* L.	Rutaceae	Throughout the year	Sour	Fruits are eaten raw.
24.	Kau thekera	*Garcinia cowa* Roxb. ex DC.	Clusiaceae	July-august	Sour	Ripen fruits are first dried and then eaten with curries or as pickle.
25.	Kea kothal	*Pandanas odoratus* Selisb.	Pandanaceae	July- December	Sweetish sour	Ripen fruits are eaten raw.
26.	Kola jamuk	*Syzygium cumini* (L.) Skeels	Myrtaceae	June - July	Sweet	Ripen fruits are eaten raw.
27.	Kordoi	*Averrhoa carambola* L.	Averrhoaceae	October - January	Sour	Mature fruits are eaten raw or as pickle.
28.	Kothal	*Artocarpus heterophyllus* Lamk.	Moraceae	March-August	Sweet	Ripen fruits are eaten raw.
29.	Kunduli	*Coccinia grandis* (L.) Voigt.	Cucurbitaceae	Throughout the year	Slightly sour	Young fruits are eaten as vegetable.
30.	Kutkura	*Menya spinosa* Roxb. ex Link	Rubiaceae	October-December	Sweetish sour	Ripen dried fruits are edible.
31.	Leteku	*Baccaurea ramiflora* Lour.	Euphorbiaceae	May - July	Sweetish sour	Ripen fruits are eaten raw.
32.	Mirika tenga	*Elaeagnus latifolia* Linn.	Elaeagnaceae	April - May	Sour	Ripen fruits are eaten raw or as pickle.
33.	Mitha amora	*Spondius axillaris* Roxb.	Anacardiaceae	July-December	Sweet	Ripen fruits are eaten raw.
34.	Mumai/ Mamoi tamul	*Pinanga gracilis* Bl.	Arecaceae	March- June	Astringent	Ripen fruits are eaten raw.
35.	Noga tenga	*Myrica esculenta* Buch.-Ham.	Myricaceae	April – June	Sour	Ripen fruits are eaten raw or as pickle.
36.	Nora bogori	*Prunus domestica* L.	Rosaceae	January - May	Sweetish sour	Ripen fruits are eaten raw or as pickle.
37.	Nuni	*alba* L.	Moraceae	June - August	Sweet	Ripen fruits are eaten raw.
38.	Outenga	*Dillenia indica* L.	Dilleniaceae	July- January	Sour	Fruits are eaten as vegetable or as pickle.
39.	Pokmou/ Kopal futa	*Physalis minima* L.	Solanaceae	March-September	Sweet	Mature fruits are eaten raw.
40.	Poniol	*Flacourtia jangomas* (Lour.) Raeusch	Salicaceae	May-July	Sweet	Ripen fruits are eaten raw.
41.	Pora Amlokhi	*Phyllanthus acidus* (L.) Skeels	Euphorbiaceae	June-July	Astringent	Ripen fruits are eaten raw or as pickle.
42.	Robab tenga	*Citrus grandis* (L.) Osb.	Rutaceae	Winter	Sweetish sour	Ripen fruits are eaten raw.
43.	Ronga Podum	*Nymphaea rubra* Roxb.	Nymphaeaceae	June-September	Sweetish	Mature fruits are eaten raw.
44.	Rupahi thekera	*Garcinia lanceaefolia* Roxb.	Clusiaceae	January-July	Sour	Ripen fruits are eaten with vegetables or as pickle. It is highly medicinal
45.	Sewa	*Caryota Urens* Linn.	Aracaceae	July-September	Slightly astringent	Mature fruits are eaten raw.

46.	Siral	*Cucumis melo* L.	Cucurbitaceae	July-October	Sandy Sweet	Mature fruits are eaten raw.
47.	Sokola tenga	*Citrus aurantium* var. *limonum* Linn.	Rutaceae	July-October	Sweetish Sour	Ripen fruits are eaten raw.
48.	Tengamora	*Hibiscus subdarifa* L.	Malvaceae	Winter	Sour	Mature fruits are eaten raw or as pickle, jam, jelly etc.
49.	Tepor tenga	*Garcinia xanthochymus* Hook . f.	Clusiaceae	October-February	Sour	Ripen fruits are eaten raw or as pickle.
50.	Thereju	*Prunus jenkinsii* Hook f. & Th.	Rosaceae	December-March	Sweetish Sour	Ripen fruits are eaten raw.
51.	Tita bhekuri	*Solanum indicum* L.	Solanaceae	May-November	Bitter	Fruits are eaten raw.
52.	Tokou	*Livistona jenkinsiana* Griff.	Arecaceae	July- September	Tasteless	Mature fruits are eaten raw.
53.	Vim kol	*Musa balbisiana* Colla.	Musaceae	Throughout the year	Sweet	Ripen fruits are eaten raw.
54.	Xilikha	*Terminalia chebula* Retz.	Combretaceae	July-December	Astringent	Mature fruits are eaten raw.

Chrysophyllum lanceolatum (Bl.) DC.

Garcinia pedunculata Roxb.

Citrus limonia

Ficus racemosa L.

Chrysalidocarpus lutescens Wendl

Citrus limon (L.) Burm. f.

Fragaria indica Andr.

Solanum torvum Swartz.

Cassia fistula L.

Elaeocarpus floribundus

Citrus medica L.

Garcinia cowa Roxb. ex DC.

Pandanas odoratus Selisb.

Syzygium cumini (L.) Skeels

Averrhoa carambola L.

Artocarpus heterophyllus Lamk.

Coccinia grandis (L.) Voigt.

Menya spinosa Roxb. ex Link

Baccaurea ramiflora Lour.

Elaeagnus latifolia Linn.

Spondias axillaris Roxb.

Pinanga gracilis Bl.

Myrica esculenta Buch.-Ham.

Prunus domestica L.


Morus alba L.


Dillenia indica L.


Physalis minima L.


Flacourtia jangomas (Lour.) Raeusch


Phyllanthus acidus (L.) Skeels


Citrus grandis (L.) Osb.


Nymphaea rubra Roxb.


Garcinia lanceaefolia Roxb.


Caryota Urens Linn.


Cucumis melo L.


Citrus aurantium var. *limonum* Linn.


Hibiscus subdariffa L.


Garcinia xanthochymus Hook . f.


Prunus jenkinsii Hook f. & Th.


Solanum indicum L.


Livistona jenkinsiana Griff.


Musa balbisiana Colla


Terminalia chebula Retz.

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