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Wild edible fruits consumed by the Santal community in Jamtara Forest Division, Jamtara, Jharkhand

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Abstract

Day-by-day, indigenous foods are going far from metallic society and bringing a lot of environmental, social, and health problems. Documentation, awareness, and restoration of traditional practices in our daily lives could enhance their quality. Keeping this in view, an attempt has been made to document the wild edible fruits consumed by the Santal community of Jamtara Forest Division (JFD), Jharkhand. A survey was made in May 2023 and interacted with the Santal community of JFD. Results revealed that about 31 wild edible fruits are consumed by the Santal community, belonging to 25 genera. It was noticed that some wild fruits have medicinal and economic values. The present communication highlights the need of value addition of these traditional foods for sustainable development.

INTRODUCTION

Fruits contain abundant dietary fibre, vitamins, minerals, and a large number of polyphenolic compounds, which are good for the body (Slavin and Lloyd 2012). Cultivated fruits are easily available in urban areas, but they are not very good for health due to the chemicals used to forcefully ripen them (Maduwanthi and Marapana 2019). Wild fruits are often underutilised and are less known to urban people (Achaglinkame et al. 2019); they are known to rural and tribal communities for having high concentrations of secondary metabolites such as flavonoids, anthocyanin, and some other phenolic compounds (Shan et al. 2019). Therefore, they are often considered to be healthy foods. Tribal communities consume such types of wild foods which is the secret of their sound health, but due to urbanisation, modernization, and mobile-loving activities, they are going far from their traditional food practices. In this regard, baseline data on unknown plants that are employed for sustainable life can be developed through documentation (Das et al. 2020), explorer work (Devi et al. 2022), taxonomy on floral diversity (Devi et al. 2020; Devi et al. 2023; Mishra et al. 2023), community interactions (Kumar 2015; Kumar 2023), etc. Therefore, it's crucial to record things like wild edible fruit in order to ensure food security and supply both rural and urban populations with wholesome food. Keeping this in view, an attempt has been made to document the wild edible fruits consumed by the Santal community in Jamtara Forest Division, Jharkhand. The present exploration work highlights the availability of diverse wild edible fruits as a traditional food in the division.

METHODOLOGY

The Jamtara Forest Division (JFD) is located in the Jamtara district of Jharkhand. It is situated at 23.95°N 86.8°E and is typically 155 metres above sea level. It enjoys a variety of plants, including Sal woods and dry deciduous forests. The four ranges that make up JFD are Jamtara, Nala, Kundhit, and Narayanpur (Ajinkya et al. 2023). The biodiversity is extremely diversified across all habitat and species levels, and the abundant variety of plants has given rise to numerous wild fruits having medicinal potential. The study areas experiences extremes of climate, with the mean temperature varying from 17°C to 32°C. The minimum temperature is 2°C in winter, and the maximum temperature shoots up to 45°C in the months of April and May (Ajinkya et al. 2023). The monsoon season runs from July to October. The Jamtara and Kundahit Ranges of the division receive slightly more rainfall on average each year than the other ranges (Mukherjee et al. 2018). The ethno-botanical data on wild edible fruits was collected during a field survey in May 2023 by using semi-structured questionnaires and

conversation with the local villagers (Plate 3). The questions mostly focused on the plant's local name (Santali) and understanding of how to use fruits. We went on field trips with the villagers, who gather these edible wild fruits from the areas in and around their homes as well as from the close-by forests (Kumar et al. 2017). Dr. Sanjeet Kumar of Ambika Prasad Research Foundation, identified the plants that were collected from the field survey

RESULTS AND DISCUSSION

Getting adequate food for everyone is a tough task, even though nature has uncountable food supplies. The exploration work in JFD on wild edible fruits consumed by the Santal community revealed that they commonly consumed 31 wild edible fruits. Among them, the most common with more palatability are *Aegle marmelos*, *Artocarpus heterophyllus*, *Borassus flabellifer*, *Buchanania lanzan*, *Diospyros melanoxylon*, *Morus alba*, *Phoenix sylvestris*, *Phyllanthus emblica*, *Schleichera oleosa*, *Syzygium cumini*, *Tamarindus indica*, *Ziziphus mauritiana*, and *Z. oenopolia*. It was observed that the fruits have less palatability are *Alangium salviifolium*, *Annona reticulata*, *Bridelia retusa*, *Cordia obliqua*, *Ficus benghalensis*, *F. hispida*, *F. religiosa*, *Semecarpus anacardium*, etc. It was also noted that some plants have economic values, like *S. cumini*, *T. indica*, *P. emblica*, *Madhuca longifolia*, *A. marmelos*, *D. melanoxylon*, and *B. lanzan*. It was also noticed that *Azadirachta indica*, *Limonia acidissima*, *Antidesma bunius*, and *S. cumini* are used for medicinal purposes. Details are listed in Table 1 and illustrated in Figure 1. Few works have carried out by the other researchers like Das (2018) reported 30 wild edible fruits from Santal Paraganas and Linda (2020) documented four edible fruits from Jharkhand state. Ajinkya et al. (2023) recently reported 20 wild leafy vegetables from Jamtara Forest Division, Jharkhand. Kumar and Kumari (2021) reported 22 edible fruits from Sahebganj, Jharkhand. The above data show that there is a gap in the documentation on wild edible fruits of Jharkhand state.

Table 1: Wild edible fruits consumed by the Santal community in Jamtara Forest Division, Jamtara, Jharkhand

Botanical name	Local name	Family
<i>Aegle marmelos</i>	Sinjo	Rutaceae
<i>Alangium salviifolium</i>	Dhela (Plate 1A)	Cornaceae
<i>Annona reticulata</i>	Mandargum	Annonaceae

<i>Antidesma bunius</i>	Matha billi	Phyllanthaceae
<i>Artocarpus heterophyllus</i>	Kathal	Moraceae
<i>A. lacucha</i>	Dabu	Moraceae
<i>Azadirachta indica</i>	Neem	Meliaceae
<i>Borassus flabellifer</i>	Talibili	Arecaceae
<i>Bridelia retusa</i>	Kadru	Phyllanthaceae
<i>Buchanania lanzan</i>	Tarab (Plate 2H)	Anacardiaceae
<i>Cordia obliqua</i>	Vuch latha (Plate 2E)	Boraginaceae
<i>Diospyros melanoxylon</i>	Tiril	Ebenaceae
<i>Ficus benghalensis</i>	Badi billi (Plate 1C)	Moraceae
<i>F. hispida</i>	Dumer/ loa	Moraceae
<i>F. racemosa</i>	Anjer	Moraceae
<i>F. religiosa</i>	Hisah billi (Plate 2G)	Moraceae
<i>Flacourtia indica</i>	Pada (Plate 1B)	Salicaceae
<i>Lantana camara</i>	Putus	Verbenaceae
<i>Limonia acidissima</i>	Pinder	Rutaceae
<i>Madhuca longifolia</i>	Kundih (Plate 2F)	Sapotaceae
<i>Milium velutina</i>	Ambe (Plate 1D)	Annonaceae
<i>Morus alba</i>	Tus	Moraceae
<i>Phoenix sylvestris</i>	Khajur	Arecaceae
<i>Phyllanthus emblica</i>	Amla	Phyllanthaceae
<i>P. reticulatus</i>	Merle	Phyllanthaceae

<i>Schleichera oleosa</i>	Kuindi/ bakdi	Sapindaceae
<i>Semecarpus anacardium</i>	Sasa	Anacardiaceae
<i>Syzygium cumini</i>	Jadre	Myrtaceae
<i>Tamarindus indica</i>	Jaja	Fabaceae
<i>Ziziphus mauritiana</i>	Janum	Rhamnaceae
<i>Z. oenopolia</i>	Uli rama janum	Rhamnaceae



Figure 1: Diversity of wild edible fruits of JFD consumed by Santal community

CONCLUSION

Food security is an important aspect of all countries, and it can be achieved through our traditional food practises. In this aspect, the present study concludes that in the face of rapid urbanisation, deforestation, and other anthropogenic activities, tribal communities like Santal are able to conserve their traditional food practises for sustainable life and a healthy environment. In Jamtara Forest Division, about 31 wild edible fruits are consumed by the Santal community for their food and medicinal purposes. They also have economic values. For taking them as day-to-day food for urban people, we need more exploration, awareness about them, and value addition for sustainable development and getting sound health.



Plate 1: Some common wild edible fruits of Jamtara Forest Division, Jharkhand; A) *Alangium salviifolium*, B) *Flacourtia indica*, C) *Ficus benghalensis*, D) *Miliusa velutina*

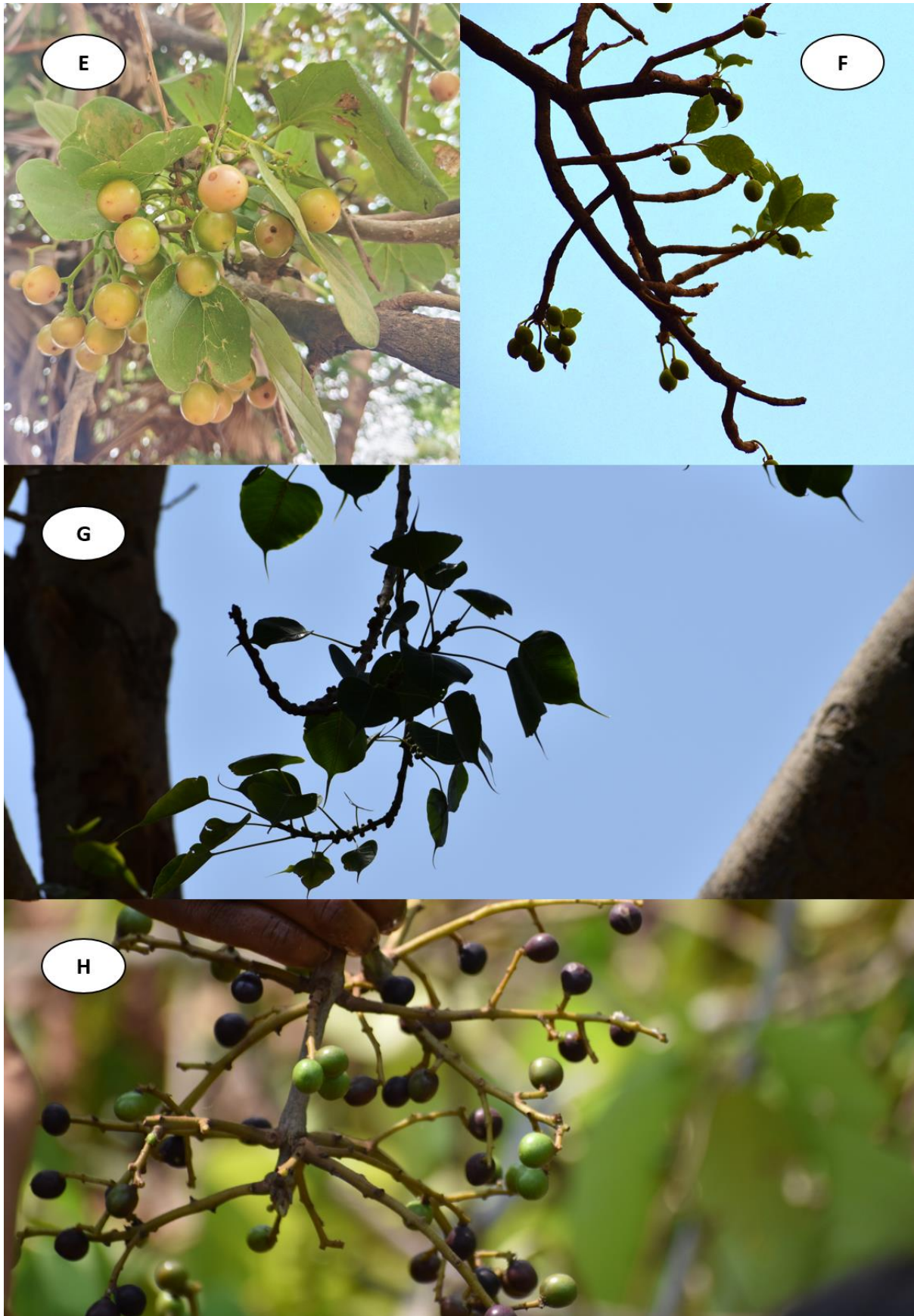


Plate 2: Some common wild edible fruits of Jamtara Forest Division, Jharkhand, E) *Cordia obliqua*, F) *Madhuca longifolia*, G) *Ficus religiosa*, H) *Buchanania lanzan*



Plate 3: Discussion with local Santal community of wild edible fruits of Jamtara Forest Division, Jharkhand

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