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Wild Edible Fruits: The Unexplored Gems of Western Ghats

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The mighty Western Ghats is one of the eight biodiversity hotspots in the world and has been given the world heritage site title by UNESCO. The Western Ghats, with its rich biodiversity, is home to a vast array of wild edible fruits that remain largely unexplored and underutilized. These fruits, adapted to the unique ecological conditions of the region, offer potential nutritional, medicinal, and economic benefits to local communities and beyond. The diverse climatic zones and varied topography of the Western Ghats contribute to the development of a wide range of fruit species, each with its own distinct characteristics and potential applications. This ecological diversity has resulted in an impressive variety of fruits, each possessing unique flavors, textures, and nutritional profiles. Many of these wild fruits have been traditionally used by indigenous communities for generations, forming an integral part of their diet and traditional medicine systems.

Introduction

The mighty Western Ghats is one of the eight biodiversity hotspots in the world and has been given the world heritage site title by UNESCO. It has an area of approximately 1,40,000 km^2 and a longitudinal stretch of about 1,600 km, with an average elevation of about 1,200 m above mean sea level. The range starts near Songadh town of Gujarat, south of the Tapti river, and runs parallel to the western coast of the Indian peninsula through the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu, ending at Swamithope, Tamil Nadu. Wild edible fruits are edible species that are not cultivated or domesticated and are accessible in various natural habitats worldwide. They are commonly collected from wild environments, especially forests, and are the most widely used non-timber forest products by tribal populations. However, India's diverse climates and increasing health consciousness offer significant opportunities to expand the production of wild edible fruits in India. These fruits, many of which remain largely unexplored and underutilized, represent a treasure trove of potential nutritional, medicinal, and economic benefits for local communities and beyond.

The diverse climatic zones and varied topography of the Western Ghats contribute significantly to the development of a wide range of fruit species. From the humid tropical lowlands to the cooler montane forests at higher elevations, each microclimate supports distinct plant communities with their own characteristic fruit-bearing species. This ecological diversity has resulted in an impressive variety of fruits, each possessing unique flavors, textures, and nutritional profiles.

Many of these wild fruits have been traditionally used by indigenous communities for generations, forming an integral part of their diet and traditional medicine systems. However, their potential extends far beyond local use. With growing global interest in novel superfoods and natural remedies, these fruits could play a crucial role in diversifying food systems, enhancing nutrition security, and developing new pharmaceutical products.

The economic potential of these wild fruits is equally significant. Sustainable harvesting and commercialization of these fruits could provide alternative livelihoods for local communities, promoting forest conservation while generating income. Moreover, the

unique properties of these fruits could lead to the development of new value-added products in the food, cosmetic, and pharmaceutical industries.

Despite their immense potential, many of these wild edible fruits remain understudied. There is a pressing need for comprehensive research to document their nutritional composition, bioactive compounds, and potential health benefits. Such studies could pave the way for their integration into mainstream agriculture and commerce, while ensuring sustainable harvesting practices to protect the delicate ecosystems of the Western Ghats.

Furthermore, the conservation of these wild fruit species is crucial, not only for their intrinsic value but also as a genetic resource for future crop improvement programs. Climate change and habitat loss pose significant threats to the biodiversity of the Western Ghats, making it imperative to implement conservation strategies that protect these valuable plant species and their habitats.

Table 1: Edible Fruits and their suitable regions in India

Region	Edible Fruits
Karnataka	*Flacourtia montana, Flacourtia indica, Canthium coromandelicum, Toddalia asiatica*
Gujarat	*Alangium salvifolium, Buchanania cochinchinensis, Cordia dichotoma, Flueggea microcarpa*
Maharashtra	*Allophylus cobbe, Capparis zeylanica, Diospyros peregrina, Phoenix humilis, Bridelia retusa*
Tamil Nadu	*Ficus exasperata, Rubus rugosus, Grewia villosa, Carissa paucinervis, Diospyros ferrea*

Table 2: Wild edible fruits with their vernacular name, a form of usage and fruiting season

Scientific name	Family	Vernacular name	A Form of usage	Fruiting season
Artocarpus hirsutus	Moraceae	Hebbalasu	Ripe fruits consumed fresh	May–Jun
Carissa spinarum.	Apocynaceae	Kouli hannu	Consumed fresh, pickle and jams	Jun–Aug
Cordia dichotoma	Boraginaceae	Challe hannu	Consumed fresh & Pickled	Dec–Feb
Elaeagnus conferta	Elaeagnaceae	Halige hannu	Consumed fresh	Jan–Mar
Opuntia dillenii	Cactaceae	Papaskalli	Consumed fresh	Thought the year
Ziziphus rugosa	Rhamnaceae	Kottemullu, Bilichurimullu	Ripe fruits consumed fresh	Feb–Mar
Rhodomyrtus tomentosa	Myrtaceae	Thavute gida	Consumed fresh	Feb–May

Nutritional values and health benefits

Wild edible fruits are rich in dietary fibers, carbohydrates (starch and sugar), vitamins, and minerals; they serve as nutritional supplements for growth and development of tribal and rural people. Some wild edible fruits have been identified to possess better nutritional values than cultivated fruits. Very common wild edible fruiting plants are *Artocarpus hirsutus, Artocarpus heterophyllus, Carissa carandas, Carissa spinarum, Phyllanthus emblica, Garcinia gummi-gutta, Mangifera indica, M. indica, and Spondias pinnata* are consumed fresh as well as its tender fruits are used for pickling, salting, and other culinary preparations

Table 3: Nutritional values and health benefits of wild edible fruits

Fruit	Key Nutrients	Benefits
Ziziphus rugosa	Moisture 62.2%, Proteins 11%, Fat 5%, Carbohydrates 26%, & Zinc 3.074 ppm	Useful in treating fever, digestive disorders, and skin infections, High in antioxidants, used in traditional medicine
Elaeagnus conferta	Nitrogen 0.57 mg/100g, Phosphorus 1.29 mg/100g, Potassium 1338.6 mg/100g, Magnesium 140.1 mg/100g & Sodium 184.3 mg/100g	Beneficial for respiratory ailments, cardiac health, and immune system support, known for anti-diabetic and anti-cancer properties
Mimusops elengi	Moisture 79.27%, Proteins 1.29%, Fat 2.67%, Carbohydrates 60.02%, Reducing sugar 8.9%, Non-reducing sugar 6.3%, Fiber 1.13% & Potassium 98.54 mg/100g	Used in wound healing and oral health and used in anti-inflammatory, and anti-diarrheal treatments
Semecarpus anacardium	Moisture 78.01%, Crude Proteins 3.04%, Fat 1.84%, Carbohydrates 11.37 g/100g, Fiber 4.33%, Calcium 26.11 mg, Mg 66.51 mg, K 248.6 mg, P 29.7 mg, & Cu 0.48 mg	Known for treating rheumatism, skin diseases, tumors, and nervous disorders,
Rubus ellipticus	Moisture 86.6%, Proteins 4%, Fat 7.10%, Carbohydrates 72.20%, Total Sugars 8.5%, Fiber 7.90%, Ascorbic acid 0.011%, Phenols 6100 mg & Flavonoids 320 mg	Effective in burns, skin diseases, antioxidant activity, diabetes & fever, Rich in flavonoids and antioxidants

Wild edible fruits and their by-products

Wild edible fruits and their by-products offer a wealth of potential uses across various industries. These fruits, often found in diverse ecosystems, provide not only nutritional benefits but also serve as valuable resources for medicinal, cosmetic, and industrial applications. Many wild fruits are rich in antioxidants, vitamins, and minerals, making them potential candidates for functional foods and dietary supplements. Their by-products, such as peels, seeds, and pulp residues, can be utilized in innovative ways. For instance, fruit peels may be processed into natural food colorants or preservatives, while seeds can be pressed for oils used in cosmetics or biofuels. Fruit pulp residues can be fermented to produce bioethanol or converted into animal feed. Additionally, extracts from these fruits and their by-products may contain bioactive compounds with pharmaceutical potential, leading to the development of new drugs or nutraceuticals. The utilization of wild edible fruits and their by-products not only promotes sustainable resource management but also creates economic opportunities for local communities involved in their harvesting and processing.

Table 4: Wild edible fruits and their By-products

Wild Fruit	Products Prepared
Carissa spinarum (Kouli hannu)	Jam, Jelly, Pickle, Juice
Ziziphus rugosa (Kottemullu)	Dried fruit powder, Candy, Dosa, juice
Elaeagnus conferta (Halige hannu)	Syrup, Herbal tea, Preserves
Rubus ellipticus (Wild Raspberry)	Squash, Wine, Jam, Dry fruit
Artocarpus hirsutus (Hebbalasu)	Jackfruit flour, Chips, Sweets
Semecarpus anacardium (Marking nut)	Ayurvedic formulations (oil, powder)
Mimusops elengi (Bakul fruit)	Mouth fresheners, Herbal powder
Phyllanthus emblica (Amla)	Candy, Churna, Juice, Pickle
Spondias pinnata (Wild mango)	Pickle, Chutney, Dried slices
Garcinia gummi-gutta (Kokum)	Dried rind, Sharbat, Syrup

Conclusion

Wild edible fruits are important sources of a wide range of nutrients and medicinal compounds.in addition to their nutritional value, these fruits are traditionally used for various purposes, including food, fiber and fuel. They are rich in both macro and micro nutrients contributing significantly to a balanced and healthy diet. Exploring & utilizing the wild edible fruits of the Western Ghats can play a crucial role in promoting sustainable nutrition and improving human health.

References

1. Deepadarshan, U., Narayanappa, M., Sophiya, P., Krishnaram, S., Pramod, S. N. And Dharmappa, K. K., 2022, Medicinal and nutritional aspects of wild edible fruits from Western Ghat of India. *Int. J. Green Pharm.*,**16**(4): 334-352.
2. Sreekumar, B. V., Sreejith, A. K., Hareesh, S. V. and Sanil, S. M., 2020, An overview of wild edible fruits of Western Ghats, India. *Genet. Resour. Crop Evol*., https://doi.org/10.1007/s10722-020-00986-5