DISCOVERY

Relish of Beng saga (*Centella asiatica* (L.) Urb.): A nutraceutical food of the Bhuian tribe

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ABSTRACT

The number of diseases and disorders is increasing day-by-day. Therefore, proper nutrition and medicines have become a major necessity for mankind. Synthetic medicines have side effects. So now a day, people are shifting their needs from manmade to classical wild therapeutic agents. There are some plants having both nutritional and medicinal properties known as nutraceuticals. One of the best examples of a nutraceutical plant is Beng saga (*Centella asiatica*). Beng saga is commonly found in moist areas usually nearby rivers, wetlands and streams. Keeping the importance of Beng saga, information was gathered about the food and medicinal values from the Bhuian tribe of the Bonai Forest Division (BFD), Sundargarh, Odisha. It was noticed that the elder members of the Bhuian tribe have good knowledge about the collection of the beng saga, its cooking process and its various health benefits. It was observed that the tribal people consume leaves of beng saga to cure fever and bloating. Normally, it can be served as an appetizer along with delicious pakhala bhata (fermented water rice). Apart from this, it has numerous health benefits which call for its documentation and value addition. In the present study, the authors have discussed the traditional tribal cooking process of the beng saga, its food, medicinal and market value. The communication brings attention to the importance of wild food.

1. INTRODUCTION

In the present scenario, people are consuming more medicines for every common ailment like cold, fever, allergy, indigestion, bloating, etc. Allopathic medicines cause harmful side effects like constipation, diarrhea, headache, insomnia, etc. Hence, people are searching 'organic' food but most people have very little knowledge about some plants which have both nutritional and medicinal properties. These types of plants are known as nutraceutical plants. The word nutraceutical means a product that has both nutritional and medicinal values. The common nutraceutical plants are Sajana saga (*Moringa oleifera*), Beng saga (*Centella asiatica*), Khamba alu (*Dioscorea alata*), Bana kolatha (*Atylosia scarabaeoides*), Nimba phula (*Azadirachta indica*), Sitafala (*Annona squamosa*), Amla (*Phyllanthus emblica*) and many more such plants that can be consumed as a day-to-day food supplement and also provide incredible therapeutic effects. It can increase life expectancy by preventing chronic disorders such as diabetes,

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cardiovascular diseases and nervous complications like Alzheimer's disease and Parkinson's disease.

So, in the search for indigenous information about such nutraceutical plants, exploration work was carried out in the year 2022. Odisha, an eastern state located in India, is enriched with a wild diversity of nutraceutical plants. There are about 64 tribal communities reported in Odisha. Among them, the Bhuian tribe is one of the major ethnic groups found mainly in the Sundargarh, Keonjhar, Mayurbhanj, Sambalpur and Angul districts of Odisha. For the present study, information about the wild varieties of nutraceutical plants was collected from the Bhuian tribe living in the Bonai Forest Division in the Sundargarh district of Odisha (Kumar et al., 2021a). In their daily lifestyle, they consume many varieties of wild plants along with Beng saga (Kumar et al., 2021b). Keeping the importance of native food plants in view, an attempt has been made to document the food and medicinal values of Beng saga consumed by the Bhuian tribe of BFD.

2. METHODOLOGY

A survey was made in the month of December 2022 in the Bonai Forest Division in Odisha. Many interviews were made with the Bhuian tribe through a set of questionnaires (Kumar et al., 2012). The information was collected and documented in the result section using the scientific name, local name and uses of Beng saga. The plant was identified by the authors.

3. RESULTS AND DISCUSSION

The authors visited Sarkunda forest and found Beng saga (*Centella asiatica*) in moist areas usually near streams. The Bhuian tribe gave information about the collection of the Beng saga and its traditional cooking process. It was noticed that the Beng saga was consumed either as saga bhaja (leafy vegetable) or as chutney (relish) by the tribe. The Bhuian people were asked about the preparation of Beng saga chutney. The authors collected a bundle of Beng saga from the Barsuan market, Barsuan range, BFD, Odisha. The market value of the Beng saga was 20 rupees for a bundle. The cook of Tensa nature camp was requested to make the chutney. The preparation of chutney was observed in which about 1 cup of leaves was added to a bowl of water and rinsed thoroughly. The water from the leaves was drained completely and then added to the mixer jar. Chopped ginger, a few garlic cloves, cumin seeds and 2 green chilies were added to the jar. A tomato was roasted, then finely chopped and added to the jar. 1 lemon was squeezed into the jar and also a little salt was added. Then the jar was covered with a lid and ground to a fine paste. Water can be added to the jar as per need. The chutney was ready to be served in a Saal leaf cup (Plate 1).

Plate 1 Traditional cooking process of Beng saga

The Bhuian tribe has described the potential health benefits of Beng chutney. They said that it is useful to consume it during a fever as it could lower the high temperature of the body. They used it to treat jaundice. It was observed that people suffering from gastric problems consumed Beng saga by boiling the leaves and then ground it with misri (rock sugar) which might be helpful in relieving the problem. Some people of the Bhuian tribe also said that the Beng saga acts as a blood purifier agent. It was noticed that Beng saga chutney was served as a side dish with the main meal. The Bhuian people also consume Beng saga bhaja (leafy vegetable) as an appetizer along with pakhala bhata (fermented water rice). Many researchers have also reported the food values of *C. asiatica*.

Kamaranga and Stanley, (1996) reported that the Asiatic pennywort may be a potential new specialty crop for the United States. It is a major leafy vegetable in Sri Lanka due to its unique flavor and nutritional and health attributes. Ogunka et al., (2020) reported that the leaves of *Centella asiatica* are rich sources of nutrients such as carbohydrates, crude fiber, ash and proteins. Physiochemical properties revealed high saponification value and stability to rancidity. The leaves are rich in bioactive components that possess a wide range of biological activity and therapeutic value. Arvind Jantwal et al., (2021) reported that the pharmacological activities of *Centella asiatica* include wound healing, anticonvulsant, antiulcer, antitubercular, immunomodulatory, diuretic, etc. It has a potent protective effect on the central nervous system, which is generally associated with its bioactive compounds including asiatic acid, madecassic acid, asiaticoside, madecassoide and brahmic acid.

4. CONCLUSION

The study concludes that the interaction with the tribal people brings major attention to the importance of wild plants. Understanding the importance of these wild plants can bring 4 benefits to people, a) It can solve food problems, b) It can save tribal food culture, c) It can provide a livelihood to people and d) It can help in the conservation of wild plants. Therefore, documentation of Beng saga and their value addition is needed.

Ethical approval

Jatropha Curcas L. seed were used in the study. The ethical guidelines for plants & plant materials are followed in the study for sample collection & identification.

Informed consent

Not applicable.

Conflicts of interests

The authors declare that there are no conflicts of interests.

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Data and materials availability

All data associated with this study are present in the paper.

REFERENCES AND NOTES

1. Jantwal A, Durgapal S, Upadhyay J, Rana M, Tariq M, Dhariwal A, Joshi T. *Centella asiatica,* Naturally Occurring Chemicals Against Alzheimer's Disease 2021; 257-269. doi: 10. 1016/B978-0-12-819212-2.00021-9
2. Kamaranga, Stanley. Asiatic Pennywort (*Centella asiatica* (L.) Urb.): A Little-known Vegetable Crop, Hort Technology 1996; 6(1):13-18.
3. Kumar S, Tripathy PK, Jena PK. Study of wild edible plants among tribal groups of Simlipal Biosphere Reserve Forest, Odisha, India; with special reference to *Dioscorea* species. Int J Biol Technol 2012; 3(1):11-19.
4. Kumar SN, Marndi S, Kumar S. Some common medicinal plants in Barsuan Range, Bonai Forest Division, Sundargarh, Odisha. Asian J Biol 2021b; 13(3):11-22.
5. Kumar SN, Mishra S, Kumar S. Documentation of Indigenous Traditional Knowledge (ITK) on Commonly Available Plants in Koira Range, Bonai Forest Division, Sundargarh, Odisha, India. Asian Plant Research Journal 2021a; 8(4):83-95.
6. Ogunka NCU, Igwe FU, Agwu J, Peter OJ, Wolugbom PH. Nutrient and phytochemical composition of *Centella asiatica* leaves, Medicinal and Aromatic Plants 2020; 9(2):1-7.