Original Research Article

Wild edible mushrooms of Rourkela Forest Division, Odisha, India

Abstract

12 wild edible mushrooms (WEM) are collected from Rourkela Forest Division, Odisha, India, and presented here along with the local name, availability, and economic values. Out of 12 enumerated WEM, nine have economic values. The presented data could be useful to enhance the livelihood of local communities.

Keywords: Food problems, livelihood, sustainability, mushrooms, Odisha

Introduction

Surveys of ethnic knowledge on foods and medicines always surprise with several unexplored bio-wealth of forest areas used by the local communities. They give a sound platform for the research and conservation activities. They teach us about sustainability. Whole world facing to fulfill the stomach of increasing population. Researchers are searching the new and derivative foods, but somehow, we all have forgotten the food wealth of forests. Forest gives all life stuffs, and among them, one stuff is wild edible mushrooms. There are several wild mushrooms reported (Kulkarni et al., 2023) that have food, medicinal, economic, and ecological significances (Kumar et al., 2024). Wild edible mushrooms are seasonal and abundantly available between July and November. Tribal people use them as a source of supplementary food, medicines, and livelihood, but still, they are unexplored and we need to address them in a proper way for sustainable utilization (Manjula and Kumar, 2024). Keeping this in view, an attempt has been made to document the wild edible mushrooms of Rourkela Forest Division, Odisha, India, through field survey and interactions with local communities.

Methodology

A field survey was conducted in Rourkela Forest Division, Odisha, India, during 2022-2024, and wild edible mushrooms were enumerated with local names(s) with the help of local tribal forest watchers, forest field staffs, and local communities. Photographs were taken, and using

the published literature (Rout et al., 2020; Mishra et al., 2021; Kumar et al., 2022b, 2022c; Kumar, 2023), twelve wild edible mushrooms were identified and presented in this communication. Rourkela Forest Division is one of the three forest divisions in Sundargarh District of Odisha State, India (Figure 1). Other divisions are the Sundargarh Forest Division and the Bonai Forest Division. Rourkela Forest Division is bounded by longitudes 84 0 46' E to 85 0 14' E and latitudes 210 83' N to 220 48' N. The division has reserved forests, proposed reserved forests, demarcated protected forests, village forests, protected forests, and DLC forests. The total forest area was computed to be 1100.43 sq. km, which is about 36.73% of the geographical area of the division (Sethi et al., 2023a, 2023b; Sethi et al., 2024; Pradhan et al., 2024). The area is rich with forests and tribal communities with abundant traditional knowledge.

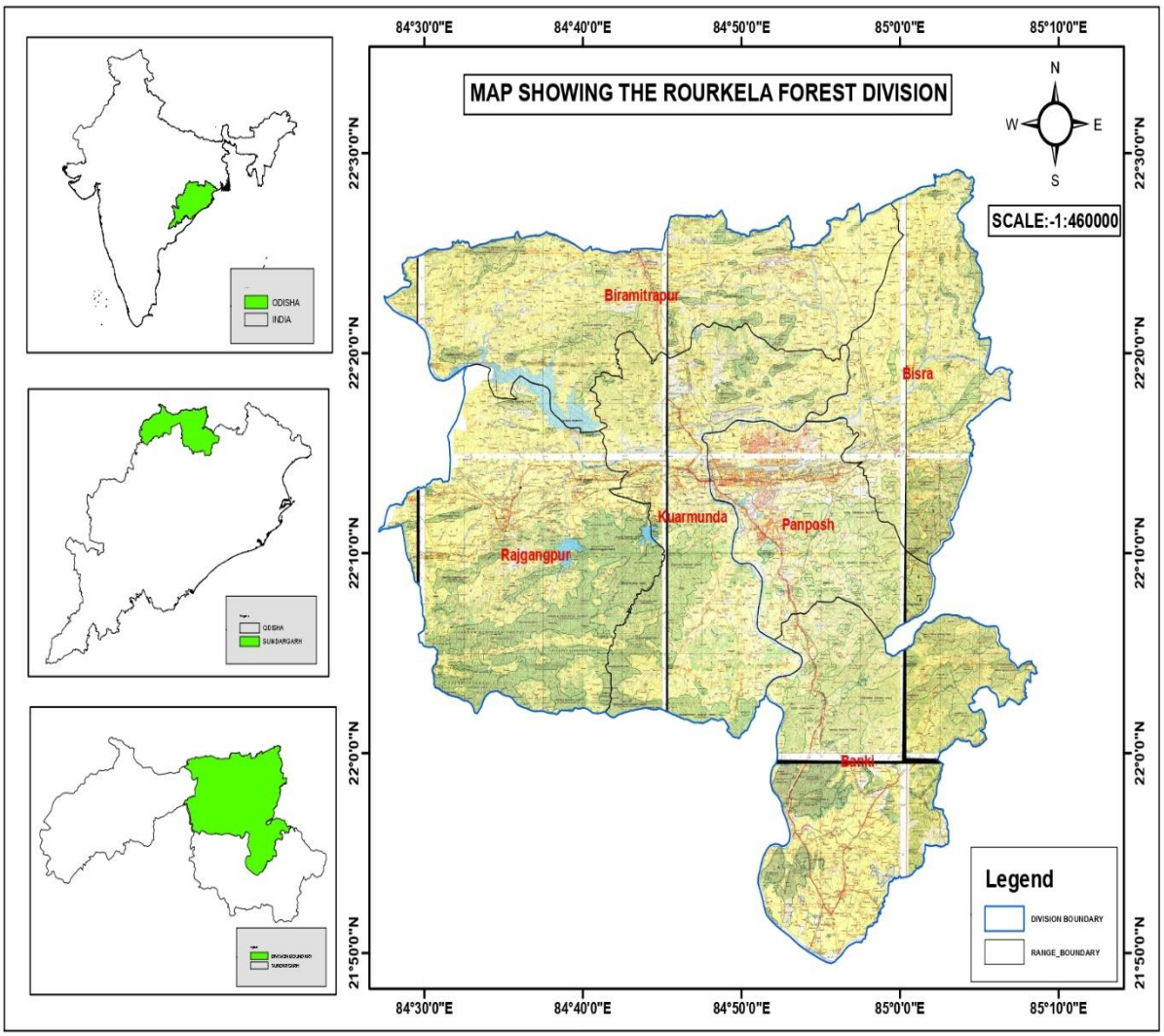

Figure 1: Geographical location of study areas

Results and discussion

Wild edible mushrooms play an important role in providing seasonal food and livelihood in Rourkela Forest Division (RFD), Odisha, India. After the survey, it was noticed that about 12 wild edible mushrooms are commonly used by the tribals of RFD (Table 1). It was observed that *Termitomyces microcarpus, Termitomyces medius, Termitomyces heimii, Amanita caesarea, Boletus edulis, Amanita egregia, Volvariella volvacea, Russula rosea,* and *Astraeus hygrometricus* have not only food values but also have economic values. These wild mushrooms are collected by locals and used to sell in the local weekly markets of RFD. *Russula nigricans, Cantharellus lateritius,* and *Dacryopinax spathularia* are collected for only consumption purposes (Table 1).

Table 1: Wild edible mushrooms of Rourkela Forest Division, Odisha, India

Local name	**Scientific name**	**Availability**	**Economic values**
Angar chatu	*Russula nigricans*	July to August	No
Bali chatu	*Termitomyces microcarpus* (Plate 1F)	July to August	Yes
Bali chatu	*Termitomyces medius*	July to November	Yes
Benua/ Bhanda chatu	*Termitomyces heimii* (Plate 1E)	July to November	Yes
Bhanu chatu	*Amanita caesarea* (Plate 1C)	July to September	Yes
Gendaphul chatu	*Cantharellus lateritius*	July to September	No
Jamu chatu	*Boletus edulis*	July to September	Yes
Manda chatu	*Amanita egregia* (Plate 1A)	July to September	Yes
Pala chatu	*Volvariella volvacea*	July to August	Yes
Patra chatu	*Russula rosea*	July to September	Yes
Rasala chatu	*Dacryopinax spathularia* (Plate 1D)	July to September	No
Rugda chatu	*Astraeus hygrometricus* (Plate 1B)	May-June	Yes

Plate 1: Some common wild edible mushrooms of RFD, A) *Amanita egregia*, B) *Astraeus hygrometricus*, C) *Amanita caesarea*, D) *Dacryopinax spathularia*, E) *Termitomyces heimii*, F) *Termitomyces microcarpus*

It came to light during the market research that tribal communities gather WEM from adjacent forest areas and sell it in local markets for between Rs. 10 and Rs. 100 per leaf pocket, depending on the species and demand. Other researchers have also reported the wild edible mushrooms from other parts of Odisha state, India. Kumar et al. (2022a) documented 15 wild edible mushrooms having economic values from Bonai Forest Division, Odisha, India. Kanhar et al. (2024) reported 20 wild edible mushrooms of Odisha state. Less documentation is available; therefore, there is a need to do more exploration work in this aspect.

Conclusion

Present study presented 12 wild edible mushrooms with local names. They have food as well as economic values. Study recommends that the enumerated wild edible mushrooms can be used for value addition to improve the livelihood of local communities.

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