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A perspective on Indian edible mushrooms with traditional knowledge

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ABSTRACT

Wild edible mushrooms hold a unique position in the traditions of ethnic, indigenous, and other tribal cultures in India and other parts of the world. The most popular mushrooms, including button, oyster, shiitake, wood ear, straw, enoki, white jelly, nameko, shimeji, hen of the woods, bolete, conks, saffron milk caps, lion mane, shaggy ink cap, bamboo, and almond portobello mushrooms, are used by various communities around the world for food, trade, and even medicine. The diverse landscape of the Indian subcontinent is a haven for the vibrant emergences of both flora and fauna especially mushroom diversity. There is both unrecorded and documented evidence of the sizeable amount that personal collections consume. In this, treatise an effort has been made to gather reliable data on the edibleness and therapeutic value of the mushrooms utilised by various groups around the nation. As a result of these efforts, more than 100 edible mushrooms that are utilised by diverse populations around the nation have been found. This document includes a list of 55 mushrooms as well as a description of their diagnostic characteristics. Additionally, a list of mushrooms broken down by different states has been supplied, along with their technical and common names, uses and its ethno-mycological data.

Key words: Mushroom, India, wild mushroom diversity, ethno-mycology

Wild edible mushrooms play a significant role in the traditions of Indian and other ethnic, indigenous, and tribal communities, while also serving as important sources of food, income, and medicine worldwide. Across northern, southern, and eastern India—regions largely inhabited by tribal and indigenous populations—patterns of mushroom collection, consumption, and trade vary considerably. Both documented and undocumented quantities are gathered for personal use.

Through these practices, 55 edible and medicinally important mushroom species have been identified as being utilized by diverse communities across the country. This manuscript presents a comprehensive list of these species, along with descriptions of their distinguishing features. It also provides a state- and union territory-wise inventory, including common and scientific names (where available) and their documented uses.

To enhance its value for students, researchers, scientists, and mushroom enthusiasts, the manuscript includes a dedicated section on the most commonly used species, featuring ethnomycological information and photographs of each. This work represents a pioneering effort in its field, and further updates will be undertaken on a regular basis.

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In several regions of India—such as Jammu and Kashmir, Himachal Pradesh, Jharkhand, Chhattisgarh, Madhya Pradesh, Assam, and Nagaland—wild edible mushrooms have been utilized since ancient times (Sarma *et al*., 2010; Tanti *et al*., 2011; Choudhary *et al*., 2015; Kumari *et al*., 2022a,b,c; Kumari *et al*., 2025). The most commonly consumed macrofungal genera include Agaricus, Boletus, Cantharellus, Lactarius, Lentinus, Pleurotus, Morchella, Ramaria, Russula, Schizophyllum, Termitomyces, and Sparassis. Numerous ethnomycological studies have documented the consumption of diverse mushroom species across the country.

In West Bengal, Dutta and Acharya (2014) compiled indigenous knowledge on wild mushrooms. In the Gorakhpur region of Uttar Pradesh, tribal communities consume termitophilous mushrooms (Vishwakarma and Tripathi, 2019). Similarly, in the Korea district of Chhattisgarh, tribal populations consume and commercially trade termitophilic mushrooms and Astraeus hygrometricus (Kumar *et al*., 2019; Srivastava *et al*., 2011).

In Himachal Pradesh, Kumari *et al*. (2022a) documented 27 edible mushroom species commonly consumed in rural areas, while Chauhan *et al*. (2014) reported 14 species from the Pabber Valley and 12 species from Kinnaur, including the highly valued morels (Morchella spp.). Malik *et al*. (2017) studied ethnomycological practices in northern Jammu and Kashmir, and Semwal *et al*. (2014) documented 23 edible mushrooms from the northwestern Himalayas. Debnath *et al*. (2019) evaluated ethnomycological practices among various tribal groups in India. In Nagaland, Ao and Deb (2019) recorded 20 edible mushroom species used as food and medicine by ethnic communities. Srivastava and Soreng (2014) also documented locally known mushrooms, including Rugra and termitophilic species, from Jharkhand.

However, increasing deforestation, urbanization, migration to metropolitan areas, and the influence of formal education have contributed to the gradual erosion of traditional knowledge among tribal communities. As a result, ethnomycological knowledge must be systematically documented, preserved, and disseminated before it disappears. This manuscript aims to safeguard such knowledge for future generations, promote awareness of the practical uses of macrofungi, and encourage further research in the field of mycology.

MATERIAL AND METHODS

The authors of the current manuscript and Scientists from the centres of All India Coordinated Research prorgamme on Mushroom have been working on it for the past 20 years to capture essential, priceless knowledge regarding the ethno-mycological uses of wild edible mushrooms in various parts of our country. In order to conduct fungus expeditions into several Indian states and conduct well-structured interviews, people with knowledge of ethnomycology were consulted. To record all the ethno-mycological data, tribal members, local Vaidya, hakims, and older (above 60 years old) were contacted. By using conventional methods, the fresh fruiting bodies were collected, stored, and identified through relevant literature (Kumari *et al.*, 2022c, 2025; Dutta and Acharya, 2014; Das 2009).

RESULTS AND DISCUSSION

A total of 55 edible wild mushrooms belonging to 15 families were studied for their ethno-mycology and listed in Table 1. Wild edible mushrooms are a popular food during the rainy season as well as a source of income. A few of the mushrooms, such as *Agaricus*, termitophilous, Rugra, coral fungi, morels, *Cantharellales, Pleurotus* sp. *Ramaria* sp., etc, are consumed as fresh vegetables, however few are kept

for use in the winter (Fig. 2a, 2g, 3a, 3d). Some of popular edible medicinal mushrooms along with scientific name, families scientific name, common names, habitat, ecology, season of occurrence, uses, and therapeutic applications are being discussed here.

1. *Agaricus augustus* Fr. (Fig. 1a)

Distinguishing features: Fruiting bodies are large, up to 20 cm in height, convex shaped yellowish cap (15 cm wide) covered with prominent brown scales, dark brown lamellae covered with a cogwheel, and a long whitish stipe (18 x 1.5 cm) with skirty annulus.

Uses: It is a delectable fungus with a reputation for being edible in many states and is said to treat diabetes, asthma, stroke and heart conditions (Malik *et al*., 2019; Ao and Deb, 2019; Pala *et al*., 2013).

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in groups saprophytically on debris, soil in mixed to coniferous forests of Himachal Pradesh, J&K, Uttrakhand and northestern regions and Western ghats.

2. *Agaricus bisporus* (JE Lange) Imbach (Fig. 1b)

Distinguishing features: Fruiting bodies are initially globose to hemispherical, up to 5 cm in height, convex shaped cap (5 cm), whitish to greyish white, covered with fibrillose scales, lamellae pinkish to brownish, attached to whitish annulate stipe (5 x 2 cm) that often changes to pinkish red on bruising.

Uses: It is a culinary treat that has been domesticated and is currently being produced commercially all over the world. Due to its meaty flavour and easy accessibility in markets at reasonable rates, this mushroom is one of the most well-known and commonly consumed all over the India. It is also used as tonic (Kumari *et al*., 2022a, 2025; Pala *et al*., 2019).

Edibility: Excellent edible

Ecology: Saprotrophic

Season: May to September

Habitat & Distribution: Growing solitary to scattered saprophytically on soil in open grass field in North eastern to north western region and Western Ghats of India.

3. *Agaricus bitorquis* (QuAel) Sacc. (Fig. 1c)

Distinguishing features: Fruiting bodies are whitish initially, becomes greyish on maturity, up to 7 cm in height with a convex to plane shaped cap often emerging from hard soil in early winter, free lamellae pinkish initially then brownish on maturity attached to a club shaped stipe (8x2 cm) with a skirt like double annular ring in the mid part of the stipe.

Uses: Similar in edibility to *Agaricus bisporus,* it is another *Agaricus* species that is excellent edible mushroom. (Kumari *et al*., 2022a, 2025)

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered saprophytically on compact hard soil in ground in open grass field of Himachal Pradesh, Punjab, Rajsthan and Western Ghats.

Fig. 1. (a.) *Agaricus augustus* (b.) *Agaricus bisporus* (c.) *Agaricus bitorquis* (d.) *Agaricus campestris* (e.) *Amanita caesarea* (f.) *Amanita hemibapha* (g.) *Amanita vaginata* (h.) *Astraeus hygrometricus* (i.) *Auricularia auricula judae*

4. *Agaricus campestris* L. (Fig. 1d)

Distinguishing features: Fruiting bodies are initially globose shaped, shiny, pure white, convex shaped cap covered with small fibrils (5-8 cm in diameter), pinkish to brownish lamellae and whitish stipe (8-10 x 0.5-1.5 cm) with an annulus.

Uses: It is an *Agaricus* species that is highly consumed and is included in all of India's cuisines. In terms of edibility, it is on par with regular button mushrooms. Fruiting bodies are generally used as immunomodulators and diabetic patients (Kumari *et al*., 2022ac; Malik *et al*., 2017; Semwal *et al*., 2014; Debnath *et al*., 2019; Pala *et al*., 2013; Singha *et al*., 2020).

Fig. 2. (a). Dry morels revied in water for cooking; (b) Fruitingbodies of *Lepista nuda*; (c.) Dried fruiting bodies of *Sparassis crispa*; (d-f) Chopped fruitingbodies of *Flammulina velutipes, Pleurotus eryngii*, *Volvariella volvacea*; (g.) A pile of fresh Termitophilous mushrooms; (h.) Chopped fruitingbodies of *Podaxis pistillaris*; (i.) Cooked dish of *Podaxis pistillaris*

Edibility: Excellent edible

Ecology: Saprotrophic

Season: May to September

Habitat & Distribution: Growing solitary to scattered, saprophytically on open field, along road sides, parks, garden soil in tropical to temperate areas.

5. *Amanita caesarea* (Scop.) Pers. (Fig. 1e)

Distinguishing features: Fruiting bodies are orange red in colour, convex cap (up to 15 cm in diameter) with a striated margin, yellowish lamellae, and a yellowish stipe with loose flaring annulus (20 x 2 cm) and a basal whitish volva.

Uses: This is one of India's northern regions' most highly recognised and delectable mushrooms. Fruiting bodies' veil components are adequately cleansed, parboiled in water to eliminate any remaining toxins, and then sautéed with oil and other spices. Although it is edible, the shape of this Amanita species is quite similar to the toxic varieties. When it comes to identification, extreme caution must be used (Kumari *et al*.; 2022ac, 2025).

Edibility: Excellent edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary to scattered saprophytically or in mycorrhizal association with on soil in mixed coniferous forest in Himachal Pradesh, Odisha, Jammu and Kashmir, Jharkand, Chattisgarh etc.

6. *Amanita hemibapha* (Berk. & Broome) Sacc. (Fig. 1f)

Distinguishing features: Fruiting bodies are large sized up to 20 cm in height, bright orange to yellowish orange, initially egg shaped, convex to plane cap (up to 15cm in diamter) with bump in cente, free yellowish lamellae attached to volvate and skirt shaped annulate stipe.

Uses: Fruiting bodies are highly valued by the people and are a source of nutritious food and money in several Indian states. Although edible, it is said to have strong resemblance to the fatally poisonous species *Amanita subjunquillea;* as a result, it should be consumed only after proper idenitification (Kumari *et al*., 2022ac, 2025; Semwal *et al*., 2014; Panda *et al*., 2019; Borah *et al*., 2018.).

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered in Mycorrhizal association with mixed forest in Northesatern to north western Himalyas to Western ghats.

7. *Amanita vaginata* (Bull.) Lam (Fig. 1g)

Distinguishing features: Fruiting bodies can be easily identified by its grayish to grayish brown cap (up to 10 cm in diameter) with striated margin and whitish lamellae attached to whitish fibrillose volvate stipe (15 x 1.5 cm).

Uses: In mountainous areas, fruiting bodies are a common food source that is gathered in large quantities for eating. Fruiting bodies are first stripped of their veil, parboiled in water to eliminate toxins, and then sautéed with butter and other spices. Although they are edible, but there is a fair chance that they may be confused with the dangerous *Amanita* species (Kumari *et al*., 2022ac, 2025; Semwal *et al*., 2014).

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered along roadsides, pastures, grassy woodland in tropical to temperate areas.

8. *Astraeus hygrometricus* (Pers.) Morgan (Fig. 1h)

Distinguishing features: Young fruiting bodies are spherical, greyish brown or blackish, and partially embedded in soil; the outer peridium splits and the sporophore attains a star shaped architecture with

radiating rays. The inner peridium covers the fertile gleba which ultimately is transformed into brownish spore mass. The spores are liberated through the ostiole at maturity. The sporophore is attached to the substratum through the rhizomorphs.

Uses: This fungus is choice edible. In the areas of Chhattisgarh, MP, Dehradun and Jharkhand, the fruiting bodies are frequently consumed. Tender fruiting bodies are often collected in bulk as a traditional nutrional delicacy and sold in local markets for erning revenue which cost up to 1000/- per kg during rainy season. Fruiting bodies are also preserved under soil for 1 week and practicised in western parts, central India and eastern lateric parts of India and used in herbal medicine (Semwal *et al*., 2014; Singha *et al*., 2020; Panda *et al*., 2019; Manna *et al*., 2014; Manna and Roy, 2014; Karun and Sridhar 2014; Biswas *et al*., 2010, 2011, 2012, 2013; Pavithra *et al*., 2015.)

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or ectomycorrhizally in caespitose manner on soil in mixed forest in tropical to subtropical region.

Fig. 3. (a.) Fruitingbodies of Morels collected in bulk for consumption; (b.) Fruitingbodies of *Ramaria aurea*; (c.) Huge amount of *Calvatia cyathiformis* for cooking; (d.) A fresh pile of coral fugi with other edible mushrooms

Table 1. List of 55 popular wild edible mushrooms form different regions of India

Sr No.	Name of mushroom	Family	Vernacular names
1	*Agaricus augustus*	Agaricaceae	Chachi, Chattari (H.P.), Fugo Olmi (Goa), Chaltee, Sirer, Haend, Maaz haend (J&K), Mannu kum (Karnataka), Kalunge cheu (Sikkim), Chattari Chewn (U.K.).
2	Agaricus bisporus	Agaricaceae	Naphuge, Kimu, Mohikhun, Naphu, legume (Assam), Marek, Tayin (Arunachal Pradesh), Khukh (H.P.), Mazzah hadur, Haend (J&K), Tit bol (Meghalaya), Phutu (Jharkhand), Chully anave (Kerala), Banger chatta (West Bengal).
3	*Agaricus bitorquis*	Agaricaceae	Khukh (H.P.), Khumb (Pb.), Chully anave (Kerala), Khumbi (Rajasthan).
4	*Agaricus campestris*	Agaricaceae	Mohikhun (Assam), Marek, Tayin (Arunachal), Khukh, Kammu Khorpotey Shong (H.P.), Khumb (Pb), Mazzah hadur, Chaltee, Sirer, Haend (J&K), Satya (Maharastra), Kurer (U.K.), Sipovar (Manipur), Mannu Kum (Karnataka), Pullekkuka, Pullekkelu, Pulkomaan, halluanave (Kerala), Khumbi (Rajasthan), Banger chatta (West Bengal).
5	Amanita caesarea	Aminataceae	Sugamunda (Chhattisgarh), Peeli chatri, Peela cheyun (H.P.), Khukhari (Jharkhand), Haladia Manda (Odisha).
6	*Amanita hemibapha*	Aminataceae	Mohikhun (Assam), Haladia Manda (Odisha), Cheyun (H.P. U.K.), Pihari (M.P.), Pei anave (Kerala), Tarmal oat, Sasan tarwal oat (W.B.).
7	*Amanita vaginata*	Aminataceae	Sugamunda safad anda (Chhattisgarh), Koit, Ghi cheyun, Ghia Koir, Mundothra (H.P.), Harravar (Manipur), Photoo, Sal chattu, Mural Chattu, Budhi oat (W.B.).
8	*Astraeus hygrometricus*	Diplocystaceae	Sal boda, Sarai Boda, Rugda, Gohiya, Bastariya phutu, Phutka, Chharkeni phutu, Jaat boda, Rakhdi boda, Sargi phutu, Patras phutu (Chhattisgarh), Kallu alambu/Kall anabe (Karnataka), Mati Tara (Odisha), Rugda, Phutu (Jharkhand), Sapp Nasvar (J&K), Phutphut, Katarua, Rugda (UK), Putko, Kurkure Chattu (W.B.).
9	*Auricularia auricula judae*	Auriculariaceae	Imbuk takek, Ikhnuro (Arunachal Pradesh), Kimu, Mohikhun, Naphu, legume (Assam), Phutoo (Andaman & Nicobar), Kanchan Pudi, Kan (HP), Murukkan kumizh (Tanil Nadu), Khumbi (Rajashtan), Rudh Papad (J&K), Thezunyieto (Nagaland), Mara kum, Mavuanabe (Karnataka), Kathambe, Kathukoon/kelu, Kathambe, Kathukumaan, Penankivianave (Kerala), Pu Vana beng (Mizorum), Kane Chayau (Sikkim), Kanode, Kanchatta, Muro(UK), Kane, Baje kane Cheyun, Kan Chatka (WB).
10	*Auricularia polytricha*	Auriculariaceae	Kanode, Muro (UK).
11	*Boletus edulis*	Boletaceae	Bhuted, (HP), Khumbi (Rajasthan) Jam Phutu (Chhattisgarh), Tit bol (Meghlaya), Jamun khukhari (Jharkhand), Chalae pandi kum (Karnataka), Bhutol, Bhutoo, Rate, Mungal, Ghogga, Tratu hendu (J&K) Hati ot (W.B.).
12	*Calocybe indica*	Lyophyllaceae	Milky or dhudhiya Mushroom (HP), Mannukukka, Vellakelu (Kerala), Doodh Chattu (WB).
13	*Calvatia cyathiformis*	Agaricaceae	Khunk, Dhukadu, Bhootu, Bhuke, Panolata, Khukh (H.P.), Chayun, Kuvedu (UK).
14	Cantharellus cibarius	Cantharellaceae	Legume, Maikhun (Assam), Pueh Heand, Chlatri (J&K), Satya (Maharastra), Paa/Nil (Manipur), Tit khangai pylleng (Meghalaya), Jalkumman, Harsianave, Harsinakalave (Kerala), Narangi chewn (UK).
15	Coprinus comatus	Agaricaceae	Fuge olmi (Goa), Khumbi (Punjab, Haryana), Setherwat, Harda guech, Tung Shamo, Goha chattri (J&K), Satya (Maharastra), Mooli Chewn (UK), Parchul Chattu (W.B.).

Sr No.	Name of mushroom	Family	Vernacular names
16	Flammulina velutipes	Physalacriaceae	Hendh/Drubdi, Heand, Manch heand (J&k), Lengphong (Manipur).
17	*Ganoderma lucidum*	Ganodermataceae	Maikhun/Legum (Assam), Khukh, Banotiyan (HP), Heand (J&K), Dodamara anabe (Karnataka), Anambe (Kerala), Cheun (UK).
18	*Geopora arenicola*	Pyronemataceae	Kundii, Khuer, Shage kaan, Kundii, Gav Padur or Khuduz, Kann Kutch (J&K).
19	*Helvella crispa*	Helvellaceae	Kanude, Kanifdu, Kanchantu, Bakra (H.P.), Batta Haend, Thunthoo, Kann guech, Kan maroda (J&K), Kanuda chewn (U.K.).
20	Hericium erinaceus	Helvellaceae	Chotva mara kum/Jool kum/Karadi kum (Karnataka), Bakarcheun, Khargosh chewn (UK).
21	*Lactarius camphoratus*	Russulacaeae	Cheun (UK)
22	*Lactarius deliciosus*	Russulacaeae	Chanmoo, Jadmoh, Migang, Chachii, Mogsa, Chachii /Chattari (HP), Kater, Haend, Narra haend, Kasar chattadi (J&K), Tit bam (Meghalaya), Ragoori chewn, Khooni chewn (UK).
23	*Lactarius rubidus*	Russulacaeae	Sirovar (Manipur), Tit bam (Meghalaya).
24	Lactifluus volemus	Russulacaeae	Chachi (HP), Cietou (Nagaland), Panai, Pati (Manipur), Tit doh/Tit tung (Meghalaya).
25	Laetiporus sulphureus	Laetiporaceae	Chasha, Geedarh kanni (J&K), Uyen (Manipur).
26	*Lentinula edodes*	Omphalotaceae	Indhi (Arunachal Prdesh), Maikhun/Legum (Assam), Sipa, Papal, Papine, Uyen, Thangjiyen (Manipur), Tit bam (Meghalya), Cietou (Nagaland).
27	*Lentinula lateritia*	Omphalotaceae	Thangjiyen (Manipur), Pa pal (Mizorum), Katuse chyau (Sikkim).
28	*Lentinus cladopus*	Polyporaceae	Khukh, Banotiyan (H.P.
29	*Lentinus squarrosulus*	Polyporaceae	Mozhaan Kumizh (Tamil Nadu), Pihiri, phutu (Chhattisgarh), Keeka anambe, Rubberkoonu (Kerala), Maikhun, Legum (Assam), Bhuphagni mikhumu (Tripura), Kath Chattu (West Bengal).
30	*Lepista nuda*	Tricholomataceae	Bhuifud, Fugo-olmi (Goa).
31	*Macrocybe gigantea*	Tricholomataceae	Dudhiya phutu (Chhattisgarh), Khusong (Tripura), Boro Dhoodh Chattu (WB).
32	*Macrolepiota dolichaula*	Agaricaceae	Kandi Koir, Baddi Chattri, Tatmour (H.P.), Pa se ek (Mizorum), Khumbi (Pb).
33	Macrolepiota procera	Agaricaceae	Phootoo (Andaman & Nicobar), RubhjTayin (Arunachal Pradesh), Bhiden phutu (Chhattisgarh), Tatmour, Baddi Chattri, Kandi koir, Koit, Bukka (H.P.), Kattu kalan (Tamil Nadu), Janeu Chattri (J&K), Khukhadi (Jharkhand), Khumbi (Pb), Chundanave, Huppuhuri anave (Kerala), Bhuphangni Mikhumu (Tripura), Digura chewn (U.K.).
34	*Morchella esculenta*	Morchellaceae	Chlango, Guchhi Jamoo, Shaime Guchhi, Dhunghlu, Duna, Dhunghli, Chyau, Jamchu, Chunchru, Chuahar Khukh, Rangmuts, Jangmuts, Chankedes, Bhuntu, Thundu, Chumbkanu (H.P.) Kann guch, Guuch, Batt Kuch, Batta Guchi (J&K), Gucchi (Punjab), Juma, Gucchi (U.K.).
35	*Ophiocordyceps sinensis*	Ophiocordy-cipitaceae	Yarsa gumba (Arunachal Pradesh), keeda jadi, keeda ghaschayo kira (UK), Keera jar (Sikkim), Yarsa gumba jeevan booti (WB).
36	*Phallus indusiatus*	Phallaceae	Sawan guech, Panne laet (J&K)
37	*Phellorinia herculeana*	Phelloriniaceae	Thumba, Gajargoti, marukhumbi and Khumbi (Rajasthan).

Sr No.	Name of mushroom	Family	Vernacular names
38	*Pleurotus citrinopileatus*	Pleurotaceae	Riyochi chhochi, Chatrad, Dal ri chattri, Banottiyan (HP) Nil, Hudziimotupa, Panei (Manipur), Karvande (Karnataka), Bhuphangni Mikhumu (Tripura).
39	*Pleurotus djamor*	Pleurotaceae	Pilakkuka, Pilakkalaeu Murikukkelu, Karvande sivappu, Markumman, Maraanave (Karnataka)
40	*Pleurotus eryngii*	Pleurotaceae	Kabul Dhingri (HP).
41	Pleurotus ostreatus	Pleurotaceae	Lauki Phootu (Andeman & Nicobar), Kimmu, Moikhun, Naphu, Laphu (Assam), Aatar (Arunachal Pradesh), Pihiri, phutu (Chhattisgarh), Olmi (Goa), Dhingri, Chattriyan, Banottiyan, Suru koir (H.P.) Sawan guch, Saroori, Chur Sirer, Kuel Heand (J&K), Chatu (Odisha), Satya (Maharastra), Pachang, Pache, Pachu, Pache Chengum (Manipur), Gorakkuka, Marakoon (Muduga), Gariambe, Marakooman, Dollyanave, Karanave (Kerala), Kannae cheaoe or Kotuchae cheaoe, Chamrey cheu (Sikkim), Satya (Maharstra), Vallathazan kumizh (Tamil Nadu), Sulla chewun (UK), Bhuphangni Mikhumu (Tripura), Kalche Jhinuk Chattu (WB).
42	*Pleurotus sajor caju*	Pleurotaceae	Dhingri, Khumb (Punjab), Vallathazan kumizh (Tamil Nadu).
43	*Podaxis pistillaris*	Agaricaeae	Khumbi, Marukhumbi (Rajsathan, Haryana).
44	*Ramaria aurea*	Gomphaceae	Tit thynatsyiar (Meghalaya), Chatrola, Shairee, Gaub or Gabur (J&K), Thokre Chayau (Sikkim).
45	*Rhizopogon roseolus*	Rhizopogonaceae	Khorpatey, Migang, Dhudh Katt, Zhanda, Buthu, Banke, Shokhe, Bhusku, Khunk, Kaniphadu,Kuadu, Bhukadi, Bhubhla, Buke (HP), Dudh Katt, Khurr, Madan Mungrae (J&K).
46	*Russula delica*	Russulaceae	Matacho, Chachi (HP), Khukhadi (Jharkhand), Kattu kalan (Tamil nadu), Patra chatu (Odisha), Sada patra, Jhor Chattu, Onti oat (WB).
47	*Russula virescens*	Russulaceae	Mukra (Manipur), Pija chatu, Patra chatu, Kali kukuda chat (Odisha), Maili Chaeoe (Sikkim).
48	*Schizophyllum commune*	Schizophyllaceae	Hubsi, Huhiun (Arunachal Pradesh), Musi Pasi chest, Laphu (Assam), Khukh, mohtran, Koet Chiyaun (H.P.), Marakukka, Purlambe, Velukukumman, Kulahikkumman, Maranenju (Kerala), Kanglayen, Lengphong, Pashi, Makhrieme, Moupa (Manipur), Pasi (Mizorum), Cieso (Nagaland), Mujurey Chyau/Phiche kangru (Sikkim), Kattu kalan (Tamil Nadu), Pakha Chattu (W.B.).
49	*Sparassis crispa*	Sparassidaceae	Dimag phutu (Chattisgarh), Aayokan, Gulmori, pichothra, shtri, Dhanturi, Kudayu, Chakru-Bakru, Oshari, Fanchi, Bhandal, Bhandharu, Kalkara, Kathmooh, Mohin, MoohchoSho, Bedth Shairee/Ban-bakari, Bakara, gobhi mushroom, Chinchdoo, Chincha, Sungagar-chacho (HP), Kawa khour, Rao Gaub, Bedth Shairee, Rao Gabur, Rai gab, Siyodi, Kakha, Urnnu, Kase, Bhedphuul, Alaav, Tingri (J&K), Gobi chewn, Kukrya, Kanduya, Singan, Himari, Buranshi chayau (UK), Thumse Chayau (Darjleeng).
50	*Termitomyces clypeatus*	Lyophyllaceae	Mohikhun (Assam), Patera Phutu, Bhigora phutu (Chhattisgarh), Isak munda, Chirkho or baala khukhri (Jharkhand), Nethale kum (Karnataka), Chirko pihari (Madhya Pradesh), Satya (Maharastra), Chundikunkka, Naimaliakkelu, Sundiambe, Ambokooman, Mula neta (Kerala), Varlang (Manipur), Mikhumu khapolok (Tripura), Bali Chattu, Kalunge Chewyun (West Bengal).

Sr No.	Name of mushroom	Family	Vernacular names
51	*Termitomyces heimii*	Lyophyllaceae	Tatmour (HP), Putru Kumizh (Tamil Nadu), Tratahlun, Tanitrat, Naddu, Sootree (J&K), Parbana chatu, Ind Chati, Nada Chatu (Odisha), Satya (Maharastra) Cheun (UK), Bhadwahi, Bhundu, Dusherra phutu, Bhimbhora phutu, Goncha phutu, Dengur phutu, Bhigora phutu, Khukhadi, Kanki phutu, Raja phutu (Chhattisgarh), Roen Olmi, Roenichim (Goa), Rupucie (Nagaland), Chiphungyar (Manipur), Isak munda, Chirko, Bada khukhri, Patiyari, Taknos mushroom (Jharkhand), Khumb (Punjab), Huthada anabe, Alandi kum, Heggala kum, Heggala anabe (Karnataka), Raj Bindo Pihari, Dumbersathi mushroom (MP), Puttukukka (Irula), Puttukellu(Kuruma), Puttaanambe, Ottathandan, Perukalikumman, Vellanave (Kerala), Pa sawntlung (Mizorum), Muplong, Maikhun, Legum, Uri mwikhun (Assam), Kaloongae cheaoe (Sikkim), Mikhumu khapolok (Tripura), Sib Chattu(WB).
52	*Termitomyces mammiformis*	Lyophyllaceae	Amme kodae kum (Karnataka), Tatmour (HP), Dumbersathi (MP), Olmi, Cheyun (UK), Bhadwahi, Bhundu, Dusherra phutu, Bhimbhora phutu, Goncha phutu, Dengur phutu, Bhigora phutu, Khukhadi, Kanki phutu, Patera Phutu (Chhattisgarh), Roenichim, Roen olmi(Goa), Mohikhun (Assam) Jharae cheaoe (Sikkim) Mikhumu khapolok (Tripura), Taanna, Sutri and Nadu(J&K) .
53	*Termitomyces medius*	Lyophyllaceae	Tratahlun, Tanitrat (J&K), Bihida chatu (Odisha), Doda anabe, Pill kodae kum (Karnataka), Teelha khukhri (Jharkhand).
54	*Termitomyces microcarpus*	Lyophyllaceae	Kolianabe, Nayikode, Katola kum, Akki kum, Kokkalae kum (Karnataka), Bhat pihari (MP), Arisikukka, Arikkelu, Koi anabe, Arikooman, Tharikumman, Monjanave (Kerala), Mohikhun (Assam), Mikhumu khapolok (Tripura), Choto karane, Uei Chattu (WB), Bhatolian, Mohtran, Baat Koir (H.P.), Nei kalan, Ari Kumizh (Tamil Ndu), Khumbiyan (Rajasthan), Satya (Maharastra), Jhari chewn, Mulchewn (UK), Kanki Phutu, Chowk Phutu, Chapat phutu (Chhattisgarh), Shiti or Shitol olamis (Goa), Zogacie (Nagaland), Inyak (Arunachal Pradesh), Balu khukhdi (Jharkhand).
55	*Volvariella volvacea*	Plutaceae	Uppu Kimizh (Tamil Nadu), Kuta chatu (Odisha), Paira phutu, Chhati, Paira ke phool, Majhar Mundu (Chhattisgarh), Fuge olmi (Goa), Charuyen (Manipur), Khumb (Punjab), Vaikkolkkumma (Kerala), Jigabni mwikhun (Assam), Powal Chattu, Basub Oat/Khar Chattu (West Bengal).

9. *Auricularia auricula judae* (Bull.) J. Schröt (Fig. 1i)

Distinguishing features: Fruiting bodies are ear to cup shaped, with a surface that ranges from reddish brown to yellowish brown, elastic, lobed, wrinkled, folded, and veined caps, and a rudimentary stipe attached to a woody substrate.

Uses: Due to its intriguing crisp texture, fresh young fruiting bodies are consumed in practically every region of the country. It is frequently sautéed with butter and other spices for consumption. It is also used to treat a variety of illnesses, including the common cold, sore throats, eye and ear infections, jaundice, and people with high blood pressure. *Auricularia auricula* judae has been domesticated due to its superb flavor (Sarma *et al*., 2010; Kumari *et al*., 2022b; Semwal *et al*., 2014; Pala *et al*., 2013; Singh *et al*., 2017 a).

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered or even in gregarious manner on dead or fallen coniferous tree in mixed coniferous forest in temperate region.

10. *Auricularia polytricha* Mont. (Sacc.) (Fig. 4a)

Distinguishing features: Fruiting bodies are cup, ear to fan shaped yellowish brown to dark brown, gelatinous, elastic with hairy structures on upper surface and under surface smooth, wrinkled, pale brown to brown with powdery dust attached to stipe.

Uses: This fungus is edible and has therapeutic use. According to animal experimental models, the aqueous extract from *Auricularia polytricha* has a milderning impact on hepatic damage. Tibetans cook these mushrooms in winters by reviving them in hot water and sautéing them along with potatoes, onions, and other vegetables. It is eaten as food in the Nagaland, Arunchal Pradesh, and it is also sold there for up to Rs. 250/- Kg both fresh and dried (Sarma *et al*., 2010; Kumari *et al*., 2022ac, 2025; Semwal *et al*., 2014; Singh *et al*., 2017 a).

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered on soil in mixed forest in subtropical areas.

11. *Boletus edulis* Bull. (Fig. 4b)

Distinguishing features: Fruiting bodies can be distinguished in the field by their globose, bun-like whitish, yellowish brown to reddish brown cap and underside with tiny pores attached by a stuffed reticulated, ridged stipe.

Uses: As its name suggests, *Boletus edulis* is a top-notch edible fungus with respectable culinary credentials. Numerous ethnic communities in the country like eating this fungus, and they also sell it for a fair price in local markets. These mushrooms' decoction is furthermore given to new mothers as an expectorant, an antidepressant, and a treatment for body numbness (Sarma *et al*., 2010; Kumari *et al*., 2022ac, 2025; Semwal *et al*., 2014).

Season: July to September

Habitat & Distribution: Growing solitary to scattered on soil mycorrhizaly in association with coniferous forest in tropical to temperate regions.

12. *Calocybe indica* Purkay. & Chandra (Fig. 4c)

Distinguishing features: Fruiting bodies are white, campanulate cap, with an umbo with adnexed creamish gills, attached to a bulbous white stipe.

Uses: The sole cultivated mushroom of Indian origin is recognised by its popular name, milky mushroom. Fruiting bodies are cooked in oil and other seasonings after being parboiled to eliminate their stickiness. The pickling process of fruiting bodies is also well known (Kumari *et al*., 2025).

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in tropical to subtropical region.

13. *Calvatia cyathiformis* (Fig. 3 c, 4d)

Distinguishing features: Fruiting bodies are large, spherical, brain to pear shaped with wrinkled surface attached to soil with rhizomorphs.

Uses: The immature fruiting bodies with white firm gleba with pleasant taste and mild flavor often used for cooking (Arora 1986; Kumari *et al*., 2025).

Season: June to August

Habitat & Distribution: Growing solitary, scattered, or in groups on soil in open grass field in subtropical to subtemperate region.

14. *Cantharellus cibarius* Fr. (Fig. 4e)

Distinguishing features: Fruiting bodies are egg yellow, with a convex to funnel shaped cap covered with appressed scales and decurrent yellowish, interviened, folded, reduced lamellae attached to a solid stipe.

Uses: This *Cantharellus* species is one of the most popular choice edible varieties. In general, fresh fruiting bodies are gathered in large quantities for eating, mainly in the Himalayan area. These mushrooms' dried fruiting bodies are sold at reasonable costs on road sides and in neighbourhood markets. They are used as a tonic for treating anaemia, gynaecological issues, and bone disorders (Kumari *et al*., 2022ac, 2025; Semwal *et al*., 2014; Borah *et al*., 2018).

Season: July to September

Habitat & Distribution: Growing solitary, scattered, or in groups on soil mycorrhizaly in coniferous forest in subtropical to temperate region.

15. *Coprinus comatus* (OF Mull.) Pers. (Fig. 4f)

Distinguishing features: Fruiting bodies are cylindrical to oval, to bell shaped, whitish covered with shaggy fibrillose scales, gills initially creamish then brownish black rapidly turns in to inky liquid attached to bulbous whitish stipe.

Uses: Young fruiting bodies are typically eaten as soup or vegetables and are said to treat skin conditions, respiratory conditions, and high cholesterol. It is excellent and frequently referred to as shaggy mane. It should be utilised as soon as possible after collecting because it will start to deliquesce with time. Alcohol should not be consumed when ingesting this mushroom (Singh *et al*., 2017a).

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in gregariously caespitose manner on grassy field, lawns, along roadsides and footpaths on soil in tropical to temperate areas.

16. *Flammulina velutipes* (Curtis) Singer (Fig. 2d,4g)

Distinguishing features: Fruiting bodies are bright orange with conico-convex cap, brownish disc with sticky surface, crowded, adnate gills, stipe velvet, tough, hollow, cylindrical yellowish brown.

Uses: A domesticated variety of this tasty fungus has been developed due to its suitable culinary qualities. It is also known as the Enoki mushroom or the bottle mushroom (Kumari *et al*., 2022ac, 2025; Pala *et al*., 2013).

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing in gregarious caespitose manner on wooden logs or stumps in conifers in temperate region.

17. *Ganoderma lucidum* Karst (Fig. 4h)

Distinguishing features: Fruiting bodies are fan to semicircular in shape, bright orange to reddish brown in color, with grayish-white poroid undersurface attached to a woody substrate by a hard, concolorous stipe.

Uses: Although it is inedible, it has a lot of health advantages, including regulating blood sugar levels,

Fig. 4. (a.) *Auricularia polytricha*; (b.) *Boletus edulis*; (c.) *Calocybe indica*; (d.) *Calvatia cyathiformis*; (e.) *Cantharellus cibarius*; (f.) *Coprinus comatus*; (g.) *Flammulina velutipes*; (h.) *Ganoderma lucidum*; (i.) *Geopora arenicola*

hepatoprotection, immune system modulation, anti-cancer properties, and stress reduction. Chinese traditional medicine has long used this mushroom.

Edibility: Edible/Medicinal

Ecology: Saprotrophic or parasitic

Season: July to September

Habitat & Distribution: Growing solitary to scattered on decayed hardwood in tropical to subtropical region.

18. *Geopora arenicola* (Lev.) Kers (Fig. 4i)

Distinguishing features: Fruiting bodies are cup shaped, cream coloured with wavy and splitted

margin, partially buried in sandy soil and often found in spring season.

Uses: It is one of the often-collected edible fungi that may be purchased for personal use and sold for Rs 250 per kg in Kashmir, India. Southern Europe also has a lot of these mushrooms (Kumar and Sharma, 2009, 2011).

Edibility: Edible

Ecology: Ectomycorrhizal

Season: July to September

Habitat & Distribution: Ascocarps often growing scattered under sandy loamy soil in under pine tree communities.

19. *Helvella crispa* (Scop.) Fr. (Fig. 5a)

Distinguishing features: Fruiting bodies are creamy to yellowish, saddle-shaped, irregularly lobed, wrinkled, with brittle cream-colored stipe.

Uses: It is usually eaten as a vegetable. Its dry powder is frequently used with warm milk to treat asthma, the common cold, intestinal irritation, and cough. Even though it has been well cooked, it is said to lack both texture and flavour. Raw consumption is not recommended (Kumari *et al*., 2022ac; Singh *et al*., 2017a; Kaul, 1978; Purkayastha and Chandra, 1985; Atri and Lakhanpal, 2002).

Edibility: Edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or gregariously often in close vicinity of wooden stumps or logs near pine communities in coniferous forests.

20. *Hericium erinaceus* (Bull.) Pers. (Fig. 5b)

Distinguishing features: Fruiting bodies are whitish to yellowish with soft spines hanging from a common, unbranched base.

Uses: It is also extremely delectable from an edibility point of view. It has several health advantages, including antioxidant, anti-diabetic, anti-inflammatory, and fairly useful in the treatment of cognitive impairment, Parkinson's disease, and Alzheimer's disease.

Edibility: Choice edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered, or in gregarious manner on soil in coniferous forest in temperate region.

21. *Lactarius camphoratus* (Bull.) Fr. (Fig. 5c)

Distinguishing features: Fruiting bodies are reddish brown in color, with a convex cap having with a central depression, crowded decurrent pinkish gills with brownish spots; stipe reddish brown that releases milky latex, commonly found in conifers.

Uses: Before eating, it must be completely cooked. It is crushed, dried, and used as a condiment in European nations to spice sauces and soups (Semwal *et al*., 2014).

Edibility: Edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in coniferous forest in temperate region.

22. *Lactarius deliciosus* (L. ex Fr.) S.F. Gray (Fig. 5d)

Distinguishing features: Fruiting bodies are carrot orange in colour, with a convex to vase shaped cap having concentric zones, decurrent orange gills; stipe cylindrical, attached to an equal-shaped orange stipe. As the name itself indicate, it is a mushroom of choice as far as edibility is concerned.

Uses: In many regions of the world, fruiting bodies are commonly regarded as a nice delicacy (Kumari *et al*., 2022ac; Pala *et al*., 2013; Bhatt *et al*., 2016; Kalita *et al*., 2016).

Edibility: Choice edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in coniferous forest in temperate region.

23. *Lactarius rubidus* (Hesler & Smith) Methven (Fig. 5e)

Distinguishing features: Fruiting bodies are orange brown to reddish brown in colour, convex to shallowly vase shaped cap having wrinkled surface. Lamellae subdecurent, crowded pale orange with brownish stains, stipe concolorous cylindrical.

Uses: It is one of the most expensive edible mushrooms that is typically used in sweet dishes like cookies, ice cream, etc. (Kalita *et al*., 2016).

Edibility: Choice edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in coniferous forest in temperate region.

24. *Lactifluus volemus* (Fr.) Kuntze (Fig. 5f)

Distinguishing features: Fruiting bodies are brownish orange with a shallow vase shaped velvety cap, with a depressed centre, lamellae whitish, decurrent stipe paler, solid that exudes milky white latex on cutting.

Uses: It is one of the tasty mushrooms with a stellar reputation in the kitchen.

Edibility: Choice edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in subtropical to temperate region.

25. *Laetiporus sulphureus* (Bull.) Murill (Fig. 5g)

Distinguishing features: Fruiting bodies are fan shaped to semicircular, slightly irregular, orange to yellowish orange, multicaped, wrinkled, and under surface yellowish, circular to angular poroid attached to a woody substrate.

Uses: It is tasty when young and fresh and is also known as "chicken of the wood." Or sulphur self. It is choice edible mushroom (Kumari *et al*., 2022ac; Das, 2009; Purkayastha and Chandra, 1985).

Edibility: Excellent edible

Ecology: Saprotrophic/parasitic

Season: July to September

Fig. 5. (a.) *Helvella crispa*; (b.) *Hericium erinaceus*; (c.) *Lactarius camphoratus*; (d.) *Lactarius deliciosus*; (e.) *Lactarius rubidus*; (f.) *Lactifluus volemus*; (g.) *Laetiporus sulphureus*; (h.) *Lentinula edodes*; (i.) *Lentinula lateritia*

Habitat & Distribution: Growing in gregarious caespitose manner on woody substrate of pine, oak, beech salix and other conifers in mixed coniferous forest in temperate region.

26. *Lentinula edodes* (Berk.) Pegler (Fig. 5h)

Distinguishing features: Fruiting bodies are giant sized with convex to plane, tawny brown to dark vinaceous cap, covered with squamules, fibrillose scales, flakes and buffy veil remnants, lamellae thick fleshed, adnate whitish lamellae with reddish brown spots; a stipe solid whitish.

Uses: Due to its excellent nutritional and nutraceutical qualities, this mushroom is among the most favoured from an edibility standpoint. It has been tamed and is

now produced on a large scale commercially all over the world. Fruiting bodies are offered for sale both fresh and dried at high rates.

Edibility: Choice Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in groups on decayed wood of deciduous in mixed forest in temperate region.

27. *Lentinula lateritia* (Berk.) Pegler (Fig. 5i)

Distinguishing features: Fruiting bodies are small, yellowish brown to brownish in color having convex to plano-convex cap, thin fleshed, covered with fibrillose scales and buffy veil remnants, with free to adante lamellae attached to a small, solid creamish stipe.

Uses: Because of its distinctive flavour and lovely aroma, this Australian variety is reportedly appreciated by people in the North Eastern Himalayan area.

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on decayed wood in mixed forest in subtropical to temperate region.

28. *Lentinus cladopus* (Fig. 6a)

Distinguishing features: Fruiting bodies are whitish with convex to mild infundibuliform shaped cap with solid whitish stipe.

Uses: This is popular edible fungus in lower regions of Himlayan range.

Edibility: Choice edible

Ecology: Saprotrophic

Season: June to August

Habitat & Distribution: Growing in caespitose to gregarious manner on decayed wood in mixed forest in subtropical areas.

29. *Lentinus squarrosulus* (Mont.) (Fig. 6b)

Distinguishing features: Fruiting bodies are creamish coloured with funnel shaped cap covered with appressed squamules with decurrent creamish crowded gills attached to tough whitish stipe.

Uses: It is a domesticated variety of a wild edible fungus that is native to Nigeria, the Philippines, and other nations. Local populations in practically every region of the country value fruiting bodies for their flavour and anti-ulcer effects. Local and tribal residents of the area collect fruiting bodies from the forest to sell in marketplaces for greater prices (Kumaeri *et al*., 2022ac; Karun and Sridhar, 2017).

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in groups on wooden logs in mixed forest in tropical to subtemperate region.

30. *Lepista nuda* (Bull.) HE Biglow & AH Sm. (Fig. 2b, 6c)

Distinguishing features: This mushroom can be easily identified in field by its lilac to purplish pink coloured fruiting bodies, convex cap with adnate lilac gills attached to cylindrical lilac stipe.

Uses: Although it is a popular edible fungus, some sensitive people may experience an adverse response when consuming it uncooked.

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered on soil in mixed forest in subtropical to temperate region.

31. *Macrocybe gigantea* (Massee) Pegler & Lodge (Fig. 6d)

Distinguishing features: Fruiting bodies are large sized, whitish in color, with a convex-shaped cap with crowded creamish gills attached to a thick fleshy, whitish stipe.

Uses: It is a typical edible fungus in Pakistan and India.

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in tropical to subtropical region.

32. *Macrolepiota dolichaula* (Berk. & Broome) Pegler & RW Rayner (Fig. 6e)

Distinguishing features: Fruiting bodies are large, with a convex to campanulate cap, whitish with brownish squamules, crowded creamish lamellae, and a double annulus, long cylindrical whitish stipe.

Uses: To strengthen immunity, people mostly consume unopened fruiting bodies, which are also prized for their flavour. It must be recognised from the toxic *Chlorophyllum* species despite the fact that it is edible.

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered or in groups in grassy field, gardens, along paddocks on soil in sub tropical to temperate region.

33. *Macrolepiota procera* (Scop.) Singer (Fig. 6f)

Distinguishing features: These are large sized fruiting bodies with convex shaped cap with small umbo, whitish, covered with brown scales, free crowded creamish gills attached to banded whitish stipe with double edged ring.

Uses: Due to its excellent flavour, enormous size, and purported ability to reduce diabetes and high blood pressure, this mushroom is one of the most often consumed. It is one of the important edible mushrooms, but it must be differentiated from the toxic *Chlorophyllum* species that closely resemble to it (Kumari *et al*., 2022ac; Semwal *et al*., 2014; Singh *et al*., 2017a; Atri and Lakhanpal, 2002).

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered or in groups in open grassy field, pastures in temperate region.

34. *Morchella esculenta* Fr. (Fig. 6g)

Distinguishing features: Fruiting bodies are oval to cone-shaped, yellowish to yellowish brown, with ridges or pits on the cap attached to a small, whitish, spongy stipe.

Uses: These morels are incredibly tasty and healthy. For the treatment of cough, colds, and to enhance

Fig. 6. (a.) *Lentinus cladopus*; (b.) *Lentinus squarrosulus*; (c.) *Lepista nuda*; (d.) *Macrocybe gigantea*; (e.) *Macrolepiota dolichaula*; (f.) *Macrolepiota procera*; (g.) *Morchella esculenta*; (h.) *Ophiocordyceps sinensis*; (i.) *Phallus indusiatus*

immunity, dried fruiting bodies are typically cooked in milk. Due to its distinctive flavour, texture, and taste, it may be purchased in the market for up to Rs. 30,000 per kilogramme (dry weight) (Kumari *et al*., 2022ac; Semwal *et al*., 2014; Nautiyal *et al*., 2001; Pala *et al*., 2013; Savitri and Bhalla, 2007)

Edibility: Highly choice

Ecology: Mycorrhizal or saprotrophic

Season: Feb to May

Habitat & Distribution: Growing solitary, scattered or in groups on dead organic matter rich in humus under mixed coniferous forests in temperate areas.

35. *Ophiocordyceps sinensis* (Berk) GH Sung, JM Sung, Hywel-Jones & Spatafora (Fig. 6h)

Distinguishing features: Fruiting bodies are generally dark brown to black, clavate to fusiform with adhering powdery, granules attached to slender,

longitudinally furrowed or ridged, stipe caterpillar buried in soil.

Uses: Fruiting bodies are kept in hot water for few hours and used a tonic. It is thought that dried powdered fruiting bodies have immunomodulatory and immune-boosting properties, as well as the ability to treat cancer. It is a healing fungus that makes an excellent dietary supplement. There are references to its utilisation in traditional Chinese, Tibetan, Sikkimese, and other cultures' medicine (Semwal *et al*., 2014; Singh *et al*., 2017a; Borah *et al*., 2018).

Edibility: Edible

Ecology: Parasitic

Season: September to December

Habitat & Distribution: Growing or parasitize on insects /larva of moths partially buried in soil in higher altitudes of Himalayan region.

36. *Phallus indusiatus* Vent. (Fig. 6i)

Distinguishing features: Fruit bodies are egg shaped initially, enclosed in peridum, whitish buff to reddish brown attached with mycelia cords on soil. Mature fruit bodies are conical to bell shaped cap girded with net like skirt attached to whitish hollow stipe.

Uses: Fruiting bodies are used to treat burns and wounds while they are at the button stage and are regarded as a delicacy when they are young. In China, it is grown on a commercial basis (Kumari *et al*., 2022ac).

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in tropical to subtropical region.

37. *Phellorinia herculeana* (Pers.) Kreisel (Fig. 7a)

Distinguishing features: Fruiting bodies are pear shaped, whitish in color, with fluffy, shaggy scales throughout the cap, gleba brownish spore mass with a woody, slightly tapering base buried in soil.

Uses: It is edible when young and gleba is white and fleshy.

Edibility: Choice Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered on sandy soil in dessert or arid areas in tropical region.

38. *Pleurotus citrinopileatus* Singer (Fig. 7a)

Distinguishing features: Fruiting bodies are easily identified in the field by their yellow to golden color, convex to funnel shaped cap with a depressed center, and subdecurrent creamish gills attached to a whitish, cylindrical stipe.

Uses: It is a tasty, quickly growing mushroom that is commercially grown in several countries, including India.

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in gregarious manner on wooden logs or stumps in mixed forest in subtropical to temperate region.

39. *Pleurotus djamor* (Rumph. Ex. Fr.) Boedijn (Fig. 7b)

Distinguishing features: Fruiting bodies are fan shaped, pinkish to reddish pink in color, with a wavy, lobed margin and pinkish decurrent gills attached to a lateral stipe.

Uses: It has nutraceutical relevance and has been domesticated and grown at commercial level. It has been tamed and farmed commercially and has significance for nutraceuticals.

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on wooden logs and stumps in mixed forest in tropical to subtropical region.

40. *Pleurotus eryngii* (DC.) Quél (Fig. 2e,7c)

Distinguishing features: Fruiting bodies are large, flattened, tan to brownish cap with thick flesh, with decurrent, whitish, reduced lamellae attached to a club shaped, swollen shaped white stipe.

Uses: It is useful for medicine and like other oyster mushroom species, it is very tasty.

Edibility: Choiced Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil associated with grasses or wooden stumps in mixed forest in subtropical to temperate region.

41. *Pleurotus ostreatus* (Jacq.ex Fr.) P. Kumm. (Fig. 7d)

Distinguishing features: Fruiting bodies are white to greyish brown, oyster shaped, with a wavy margin and decurrent creamish gills attached to a whitish short stipe.

Uses: This is one of the most well-liked edible mushrooms, and locals use it to treat diabetes, jaundice, hypertension, asthma, cancer cells, chronic disease, etc. (Kumari *et al*., 2022ac; Das, 2009; Pala *et al*., 2013; Singha *et al*., 2020; Purkayastha and Chandra, 1985).

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on wooden logs or stumps in mixed forest in tropical to subtropical region.

42. *Pleurotus sajor caju* (Fr.) Singer (Fig. 7e)

Distinguishing features: Fruiting bodies are greyish brown, fanshaped, with a wavy margin, and broad gills laterally attached to a short, whitish stipe.

Uses: It is a preferred mushroom in terms of taste. Commercially cultivated.

Edibility: Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on wooden logs and stumps in mixed forest in tropical to temperate region.

43. *Podaxis pistillaris* L (Fr.) (Fig. 2h,2i, 7f)

Distinguishing features: Fruiting bodies are cylindrical in shape, whitish in colour, covered with flakes or shaggy scales with gleba internal blackish spore mass, attached to whitish woody stipe.

Uses: Arid regions of the nation gather fruiting bodies in large quantities and sell them at neighbourhood markets and next to other veggies on the sides of the road. To treat skin issues, its dry powder paste is employed. This fungus is edible and has therapeutic use. It is used in traditional medicine in Yemen, South Africa, and China to cure skin conditions, sunburns, and inflammation (Atri and Mridu, 2018).

Fig.7. (a.) *Phellorinia herculeana*; (b.) *Pleurotus citrinopileatus*; (c.) *Pleurotus djamor*; (d.) *Pleurotus eryngii*; (e.) *Pleurotus ostreatus*; (f.) *Pleurotus sajor caju*; (g.) *Podaxis pistillaris*; (h.) *Ramaria aurea*; (i.) *Rhizopogon roseolus*

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered on sandy soil in hot drier region or arid desert region.

44. *Ramaria aurea* (Schaeff.) Quél. (Fig. 3b, 7g)

Distinguishing features: Fruiting bodies are densely branched, with vertically arranged branches ranging in colour from coral pink to orange and a thick fleshed base, which is common in conifers.

Uses: Fruiting bodies are consumed as food. It is edible when young and flesh is still tender.

Edibility: Edible

Ecology: Saprotrophic or mycorrhizal

Season: July to September

Habitat & Distribution: Growing scattered on soil in coniferous forest in temperate region.

45. *Rhizopogon roseolus* (Corda) Th. Fr. (Fig. 7h)

Distinguishing features: Fruiting bodies are potato like in outline, greyish brown to brownish orange with reddish pink bruising and compact texture growing below soil.

Uses: In Japan, it is a preferred mushroom and a table treat (Kumari *et al*., 2022 ac; Kumar and Sharma, 2011).

Edibility: Choice Edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary to scattered partially buried on soil in mixed forest in subtropical to temperate region.

46. *Russula delica* Fr. (Fig. 8a)

Distinguishing features: Fruiting bodies are initially loath and partially buried in soil, creamy white tinged with brownish spots on cap, creamish decurrent gills attached to a whitish stout stipe.

Uses: It tastes bad and has a lousy flavour. Despite this, it is consumed and even pickled after extended boiling in Russia, Ukraine, Cyprus, and Lesvos, Greece (Singh *et al*., 2017 b).

Edibility: Edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in tropical to subtropical region.

47. *Russula virescens* (Schaeff). Fr. (Fig. 8b)

Distinguishing features: Fruiting bodies are whitish in colour with a dome to convex cap, greenish patches scattered on the surface, and crowded, creamish lamellae attached to a cylindrical, cream-colored stipe.

Uses: It is one of the most popular mushrooms and has a great flavor (Panda *et al*., 2019; Bhatt *et al*., 2016; Das, 2009).

Edibility: Choice edible

Ecology: Mycorrhizal

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in tropical to subtropical region.

48. *Schizophyllum commune* Fr. (Fig. 8c)

Distinguishing features: Fruiting bodies are oyster to fan shaped, off white to greyish white, covered with wooly hairs with underside whitish, splitted gills, tough texture.

Uses: It is an edible mushroom which is widely consumed in North eastern states of India such as Mizoram, Manipur, Arunachal Pradesh, etc. and also in Mexico and other tropical countries. Fruiting bodies are often boiled in water to reduce hard texture and cooked along with ingradients and spices in butter or oil and also sold in different local markets of region up to 300 per kg (Kumari *et al*., 2022 ac; Ao and Deb, 2019; Singh *et al*., 2017a; Singha *et al*., 2020; Borah *et al*., 2018).

Edibility: Choice edible

Ecology: Saprophytic

Season: whole year

Habitat & Distribution: Growing saprophytically, scattered or in groups or even in gregarious manner on dead or living woods in almost every nook of India.

49. *Sparassis crispa* (Wulfen) Fr. (Fig. 2c, 8d)

Distinguishing features: Fruiting bodies are like a globe, creamish to yellowish, multilobed, wavy, curly, somewhat ribbon like folded into a brain like structure.

Uses: It is edible when young and fresh (Kumari *et al*., 2022 ac, Semwal *et al*., 2014).

Edibility: Choice Edible

Ecology: Saprotrophic/ Parasitic

Season: July to September

Habitat & Distribution: Growing solitary on roots of wood in mixed forest in subtropical to temperate region.

50. *Termitomyces clypeatus* R Heim (Fig. 8e)

Distinguishing features: These are creamish colored fruiting bodies with brownish disc, campanulate cap having conical perforatorium, crowded adnate gills attached to long tapering stipe forming pseudorhiza often growing on moist soil of termites.

Uses: It is a delicious, widely regarded edible mushroom and a well-liked delicacy across the nation.
Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered on moist soil of termites in tropical region.

51. *Termitomyces heimii* Natarajan (Fig. 8f)

Distinguishing features: These are white coloured fruiting bodies with a convex to applanate cap and adnexed creamish gills attached to a stipe with a double ring on the upper portion, and tapers into long pseudorrhiza.

Uses: It is a preferred edible fungus with a distinct flavour, texture, and high nutritional content. Every year at the start of the rainy season, rural or tribal groups collect and sell these mouthwatering mushrooms in large quantities from their natural habitats for exorbitant prices on roadside markets in India, China, Malaysia, and Nepal. Fruiting bodies are also used in soups, salads, and other foods as well as

to treat skin conditions, viral fevers, anaemia, measles, constipation, and diarrhea (Kumari *et al*., 2022 ac, 2025; Singha *et al*., 2020).

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in groups on moist soil of termites in tropical to subtropical region.

52. *Termitomyces mammiformis* R Heim (Fig. 8g)

Distinguishing features: Fruiting bodies are easily recognized by its white coloured convex cap with mammiform perforatorium in the centre, adnexed serrated creamish gills attached to stipe with a double ring on the upper portion, including pseudorrhiza.

Uses: Similar to *T. heimii*, this delicacy is also very sought in many marketplaces around the nation. (Sarma *et al*., 2010, Kumari *et al*., 2022abc, 2025; Atri *et al*., 2012).

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in groups on termitaria in tropical to subtropical region.

53. *Termitomyces medius* R. Heim & Grassé (Fig. 8h)

Distinguishing features: Fruiting bodies are creamish white, convex, with an acute brownish umbo and adnexed cream-colored gills connected by a thin cylindrical stipe.

Uses: It is a different edible species of Termitomyces that grows wild and has a distinct flavour and texture (Kumari *et al*., 2022abc, 2025; Atri *et al*., 2012).

Edibility: Choice edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in groups on decayed wood in mixed coniferous forest in temperate region.

54. *Termitomyces microcarpus* (Berk.& Broome) R. Heim (Fig. 8i)

Distinguishing features: These are small sized white coloured fruiting bodies with convex cap having small acute umbo and adnexed whitish gills attached on thin fragile stipe without pseudorhiza are growing gregarious on termite hills.

Uses: Fruiting bodies are gathered in large quantities and consumed frequently in practically every state due to its distinctive flavour and medical characteristics, which include immunity booster, pain reliever, and anaemia. They are also given to mothers after childbirth to enhance their body's immune system. These are frequently provided with pulao and rice. It is a widely distributed edible plant in Asia and Africa (Kumari *et al*., 2022abc, 2025; Atri *et al*., 2012; Semwal *et al*., 2014).

Edibility: Excellent

Ecology: Saprotrophic

Season: July to September

Fig. 8. (a.) *Russula delica* (b.) *Russula virescens* (c.) *Schizophyllum commune* (d.) *Sparassis crispa* (e.) *Termitomyces clypeatus* (f.) *Termitomyces heimii* (g.) *Termitomyces mammiformis* (h.) Temitomyces microcarpus (i.) *Volvariella volvacea*

Habitat & Distribution: Growing solitary, scattered gregarious clusters on termite hills in tropical to subtropical region.

55. *Volvariella volvacea* (Bul.) Singer (Fig. 2f, 8j)

Distinguishing features: These are soft, cream to grayish colored fruiting bodies with greyish brown to blackish silky fibrillose scales on the cap and salmon-free gills attached to a white volavate stipe that grows on paddy straw.

Uses: These mushrooms are harvested from the forest by several national tribes and sold for a profit. This well-known species has been tamed and is currently farmed on a commercial scale all over the world. (Kumari *et al*., 2022 ac; Davidson *et al*., 2012).

Edibility: Excellent edible

Ecology: Saprotrophic

Season: July to September

Habitat & Distribution: Growing solitary, scattered or in caespitose manner on soil in mixed forest in tropical to subtropical region.

CONCLUSIONS

The current manuscript shows that there is still a need to record ethnic knowledge about edible and

medicinal mushrooms because these resources and knowledge are disappearing at an alarming rate. In addition, it was discovered that respondents under the age of 35 knew very little about the ethno-mycological uses of mushrooms, with the exception of the Button and *Morchella* species. Therefore, with the passing of a few elderly tribe members, elders, and Hakims, the knowledge on the usage of mushrooms might disintegrate and be lost for all time.

CONFLICT OF INTEREST

The authors decalared that they had no conflict of interst.

AUTHOR CONTRIBUTIONS

Conceptualization BK, HK, and SHK; Data collection, Photographs, arrangment and analysis BK, HK, SK; Writing and editing BK and HK.

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