

## **Mushrooms of Nepal**

Review by Daniel Winkler - Mushroaming

There is a dearth of publications, be it books or scientific papers on fungi of the Indian subcontinent. Some years ago I was invited to a conference to present on Tibetan Caterpillar fungus (*Ophiocordyceps sinensis*), which took place in Himachal Pradesh in November and I wanted to connect that with some mushroom hunting in India. I figured out that there is a rainy season in Kerala in South India and tried to find literature on Indian macrofungi and was stunned how few scientific papers on mycology were available. Looking at the incredible biodiversity in South Asia, and the abundance of books on flora and fauna, the lack of publications on the S-Asian fungi can only be understood as another indicator for the prevailing mycophobia in Hindu culture, which was not helped by British occupation. Once I asked an Indian mycologist about mushroom appreciation in India and I was told, only the top and the bottom of India's society are interested in mushrooms. The top being a wealthy westernized elite enjoying gourmet mushrooms, the bottom referring to aboriginal people, sometimes known as Adivasi. There is traditional appreciation and knowledge of mushrooms in far flung corners of the subcontinent, like in Nagaland and especially in the Himalayas. Exception to mycophobia are the appreciation for "Khumbi" (*Podaxis pistillaris*), the Stalked Puffball that is well known and traded in markets in NW India and Pakistan and the tropical Termite mushrooms (*Termitomyces* spp.). Now to be fair, the reviewed book is "Mushrooms of Nepal" and not India, but much of Nepal's scientific establishment has a Hindu influenced cultural background. Anyway, it is impressive that tiny Nepal has to offer such an important book and India has nothing like it. Something noteworthy but not comparable is a 1985 "Manual of Indian Edible Mushrooms". Thus Nepal's Mushroom's uniqueness is definitely its greatest bonus, there is nothing comparable besides the 1<sup>st</sup> edition of this book from 20 years ago, but the new edition offers lots of new entries and taxonomic revisions.

The softbound, pocket-book sized (14x21cm) book starts out with chapters on Nepal's phyto-geography and climatology, and complete listings of research accounts from historical explorations published from the early 19<sup>th</sup> century by J.D. Hooker and alike to 20<sup>th</sup> & 21<sup>st</sup> Century fungal investigations carried out by different Nepali and foreign mycologists, some of them presented with a portrait of the researcher. All fleshy Ascomycota and Basidiomycota species reported in these explorations and later day investigations are listed in the following chapters. All species are listed with original author, when available local names, and who reported it from where in Nepal. When available there are further notes to substrate, habitat (or host when applicable), edibility or other uses and where else a fungus is known to occur around the world. This section is an important contribution to increasing our knowledge of mushroom distribution around the world. There are special chapters for clavarioid and gastroid fungi and for the

genera *Amanita* (one of the author's favorites), *Lactarius*, and *Russula*. These chapters make up the bulk of the book, about 220 pages of the 340 total pages. This is followed by a chapter on ethnomycology including a look into Ayurvedic concepts of mushrooms. The ethnomycology section is my personal favorite, since it provides a great insight into which mushrooms are collected by Nepal's very diverse ethnic groups. It also includes a walk through the taxonomy referring to known edibles and if known in Nepal as edible, however I have not read the whole book, but leaved through it and cherry picked certain chapters and sections. The next chapter lists all articles published on mushrooms in Nepal, which starts out with nearly 60 articles published by Adhikari, the author himself. This is followed by a 35 page Index of all species known to exist in Nepal. In the end are 23 color plates each with 6 to 16 images, most of them around 3x4 cm in size. Thus a lot of material is depicted and with good fungal background knowledge lots of information can be extracted, but the size does not allow for photo-based field identification.

I am in no position to assess the whole book in its "taxonomic correctness" and many other aspects that my eye will not catch. Therefore I will just look quickly into *Cordyceps* & allies and assess what I see. In the Index of Ascomycota there are over 20 species listed as *Cordyceps* referring to pages to look them up in the detailed listings, which take up eight pages. The index does not reflect recent changes in taxonomy, but the detailed listings do, i.e. it lists *Elaphocordyceps ophioglossoides* as *Tolypocladium ophioglossoides*, a taxonomic change only suggested in 2014. Also many entries contain insect host, i.e. Lepidoptera larva etc. and with the teleomorph species the anamorph name is offered. A whole page with lots of information has dedicated to *Ophiocordyceps sinensis*, just the translation and transcription from its Tibetan name *Yartsa gunbu* is not full on target (Solukhumbu, Dolpa and Mustang Districts of Nepal are populated by originally Tibetan peoples like the Sherpas).

So who would need "Mushrooms of Nepal"? Anyone going to Nepal, the Himalayas and elsewhere in South Asia looking for mushrooms. And who would appreciate this book? Anyone interested in Asian ethnomycology and mushroom distribution around the world.

Anyone else who just wants a short overview of Nepal's funga could read Chapter 9 of the extremely comprehensive "Nepal - An introduction to the natural history, ecology and human environment of the Himalayas", edited by Georg Miehe, Colin Pendry & Ram Chaudhary. Within this new Nepal book is a 7 page chapter entitled "Mycota", co-authored by Mahesh Kumar Adhikari, the author of "Mushrooms of Nepal" and Gerhard Kost and it offers a summary to Nepal's fungi, describing their diversity, ecological importance and discussing the paucity of research on this neglected kingdom. And I should disclose that this 11 x 8.5 inch, richly illustrated "Nepal" tome contains an "Ethnobotany" chapter by Sangeeta Rajbhandary to which I contributed describing the *Yartsa gunbu* phenomenon in Nepal.

Back to “Mushrooms of Nepal”, who would regret buying this book? Anyone who was expecting leaving through pages of beautiful mushroom images, something this book does not offer. Also, someone getting upset when spotting typos and other textural challenges should clearly stay away. However, these limitations do not take away from the incredible wealth of knowledge offered here for \$35. It is clearly a lifetime work of love that luckily saw the light of the day.

References:

Adhikari, Mahesh Kumar 2014. Mushrooms of Nepal (Editors G. Durrieu & H.V.T. Cotter), Nepal, 340 pages.

[Webpage of the author: <http://www.mkadhikari.com.np/index.php> ]

Purkayastha, R. P. & Aindrila Chandra 1985. Manual of Indian Edible Mushrooms. Today and Tomorrow's Printers and Publishers, Delhi, 267 pages.

Nepal: An introduction to the natural history, ecology and human environment of the Himalayas. Edited by Georg Miehe and Colin Pendry, 2015, Edinburgh Royal Botanical Gardens, 560 pages ([link](#))