

'Gucchii' : The Edible Mushroom of the Himalayan Wilds

Sanjay K. Singh

Sanjay K. Singh, Wildlife Institute of India, Post Box # 18, Chandrabani, Dehradun 248001

The Himalayan biodiversity shows up several plants and fungi, the uses of which are long known to the indigenous community. One such fungus species is the morel mushroom or *gucchii*, an important food source and now also an important source of supplemental income for rural households in Himachal Pradesh. The paper describes the morel, its mode of collection and its potential contribution to the economy, while also revealing the hazards of indiscriminate collection from the wild.

Occurrence

Mushrooms, as exotic sources for vegetarian food, are macroscopic members of higher fungi belonging to the class of ascomycetes and basidiomycetes. *Morchella*, commonly known as the sponge-mushroom or morel-mushroom, is known locally as 'Gucchii' [literally, 'bunch'] and is an important mushroom belonging to discomycetes of Ascomycotina. All the 11 species identified so far as belonging to the genus *Morchella* are edible. These morels are more usually known by characteristic names, viz. thick-footed morel (*M. crassipes*), yellow morel (*M. esculenta*), grey morel (*M. deliciosa*), grey-black morel (*M. conica*), black morel (*M. angusticeps*), half-free morel (*M. semilibra*), etc. False morels, on the other hand, are known as laurels, lorches and brain fungi, and can cause severe to fatal poisoning. False morels can be easily identified by their convoluted heads which look more like a brain than a sponge.

In India, the morel is distributed over the states of Kashmir, the hills of Uttar Pradesh and Himachal Pradesh. The altitudinal range of the species is between 1000-4000m. At the higher elevations, morel blooming occurs just after the snow-melt each year. In the Kullu district of Himachal Pradesh, this fungus is widely recognised as a cash crop, and the livelihoods of several people depend on its collection. Collection of morel species from the wild goes back a long way since people of the area report the practice from ancestral times and use it moreover as a common vegetable. Commercialisation of the species began in the late-Sixties when it found an international market, and was exported to several developed countries such as the US, France, Germany and Switzerland primarily to be used as a delicacy soup. Over the Eighties and Nineties the species has assumed greater commercial value because of increased demand and decreased supply on the international market. The present situation of the species assumes considerable importance because of the fact that so far *ex-situ* cultivation of the species has not achieved any success, and natural survival and regeneration is much below the extraction rate.

Table 1. Composition of Mature Ascocarp of *Morchella esculenta*

Constituents	% Composition on fresh-weight basis
Moisture	89.5
Protein	20.4
Fat	4.8
Total Carbohydrates	64.4
N-free Carbohydrates	55.7
Fibre	8.7
Ash	10.4
Energy-value (Kcal/100g)	385.0

Based on an Annual Report of FAO.

Collection

All species of morel come in muted shades of black, brown and grey, scarcely distinguishable from the forest floor, which makes it difficult for an inexperienced *gucchii* collector to notice them on the ground. Rich crops can be harvested in the spring that follows the forest-fire season. Forest fires make essential nutrients available to the charcoal-loving morel species. An important related point needing to be pondered is that the surface fire kills most of the surface-dwelling microbiota and partially sterilises the surface layer which can then be easily colonised by mycelium. The forest fire also makes an environment where competitive saprophytic colonisation is minimal. Thus after devastation from World War II, the European arena was able to produce record crops of the species for some time. Keeping in view the importance of fire in morel production, the tribal peoples in the Himalaya set fire to certain pockets of the forest in order to harvest a rich crop the following year.

In the Kullu Valley, most people residing in close proximity to forests are dependent on the collection of morel and enter the forest for their daily requirements. As stated, the season for *gucchii* commences with snow-melt i.e. from March, and lasts till the time that other

