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MYCO-ECOLOGICAL STUDIES OF NATURAL MOREL BEARING SITES IN SHIVALIK HILLS OF HIMACHAL PRADESH, INDIA

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ABSTRACT

Seven natural morel-bearing sites were investigated during fruiting season of *Morchella* for their physico-chemical and soil microbiota to determine conditions required for morel fructification. Sandy loam soils with humus and high aeration supported the morel fruiting. Soil temperature between 18-22.7 C, air temperature 23-27 C at low elevations and 18-27 C at high elevations, pH slightly acidic to neutral (6.5 to 7.0) and high electrical conductivity (44.4 to 176.3 μ S) were recorded during natural occurrence of morel fruiting. Elemental analysis of soil revealed high carbon, nitrogen, calcium, nitrates, sodium and lead with low phosphates, chlorides and potassium below the fruit body in comparison to soil away from the fruit body. *Hyphomyces ocraseus*, *Phoma* sp., *Blastomyces*, *Acremoniella*, *Gliomastix* and *Cladosporium* were invariably found associated with the soil beneath *Morchella*. Four bacterial species, namely, *Micrococcus luteus*, *Micrococcus varians*, *Bacillus sphaericus* and *Pseudomonas* spp., were also isolated from almost all the natural morel bearing sites. These myco-ecological conditions of natural morel bearing sites are of significance in controlled domestication trials.

Key words: *Morchella*, myco-ecology, soil elements, microbes, fructification.
