Oral Presentation

Hypogeous fungi (truffles) diversity and cultivation at the upper timber line

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Truffles cultivation is in need for new cultivation areas. Hypogeous fungi (truffles s. l.) are known to occur mainly in the Mediterranean climates but recent activities disclosed that hypogeous fungi are present in colder areas including a successful cultivation in boreal zones (Shamekh et al 2013).

The upper timber lane was never of interest of commercial truffle hunters thus it remained understudied until recently. The review study focused on high altitude areas around the globe where truffles (incl. genus Tuber) are expected to grow. We have sampled areas in the SE central Alps, Dinarides, western Himalayan (Pakistan) area and Inner Mongolia in China.

Among commercial truffes Tuber aestivum was collected in beech forest at high altitude (> 1500 m a.s.l.) (Grebenc et al., 2011) and T. melanosporum-related novel true truffle species T. petrophylum (Milenković et al., 2015). Novel ectomycorrizae from the genus Tuber were retrieved also from Himalaya, Inner Mongolia and Alps (Ilyas 2013; Jabeen and Khalid, 2014) including a broadly distributed novel Tuber species limited to the upper timber line.

Results and preliminary economic calculations for cultivation suggest good chances for successful cultivation and potentially economically justified use of truffles either as a plantation culture or as a supplementary inoculation species for environmental restoration purposes, at high-altitude alpine conditions.