

2nd International Conference on

MYCOLOGY & MUSHROOMS

September 25-26, 2017 Chicago, USA

Discoveries of two new species: *Psathyrella canalus* and *Psathyrella puntini* from low lands of Pakistan by using molecular approachSamina Sarwar¹, Qudsia Firdous¹, and Abdul N Khalid²¹Lahore College for Women University, Pakistan²University of the Punjab, Pakistan

Introduction: There are a few mandatory characteristics of mushroom species that need to take into account before title them as a novel one. In this way, morphological features including their habitat are the basic features to be noted critically and extensively. Considering this criterion loads of new ascertains have been made throughout the world. From hilly areas of Pakistan, several gilled and non-gilled macro fungi belonging to different orders have been reported for ages. However, this piece of study dealt with exploration of the lowland species belonged to family Psathyrellaceae. The genus *Psathyrella* has few easily discernible characters which leads it to be a cleaned-up genus to those that has small brown spores. The archetypal little brown mushrooms were collected from plain areas of Pakistan falling in Punjab province.

Methods: Initially both species were examined macroscopically and microscopically. Nonetheless, species identification has confirmed by amplifying their conserve nuclear ribosomal internal transcribed spacer region using model fungal primers.

Results: Final result was inferred when *P. canalus* and *P. puntini* got their separate clades showing 73 and 71 bootstrap values, respectively, when compared among twenty-five other species. Additionally, *P. canale* had bell-shaped to convex, slightly upward pileus margin, adnexed to adnate hymenium and soft, hollow and thick stipe were the key features that made it distinct from other *Psathyrella* species macroscopically. On the other hand, *P. puntini* was convex to umbonate and the presence of small milky-white to lemon chiffon whitish dots all over the pileus surface was the major attribution towards its discovery. Moreover, its hymenium was dark-brown, adnexed to slightly narrowly adnate while stipe was milky-white to creamy white with an annulus.

Conclusions: New discoveries are vindicated using advanced methods as here a DNA level study has proven the novelty of two new *Psathyrella* species. These findings support in evolutionary history of these particular genera, they may have applications in different industries as well.

Samina_boletus@yahoo.com

Notes: