

High diversity of *Morchella* and a novel lineage of the Esculenta clade from the north Qinling Mountains revealed by GCPSR-based study

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SUPPLEMENTAL FIGURE LEGENDS

Supplemental figure 1. Morphology of *Verpa bohemica*.

(A) asci, double wall, (B-C) asci and paraphysis, paraphysis with more than 3 septals is longer than the ascus (D) two ascospores in each ascus, and thickened at the spore apic.

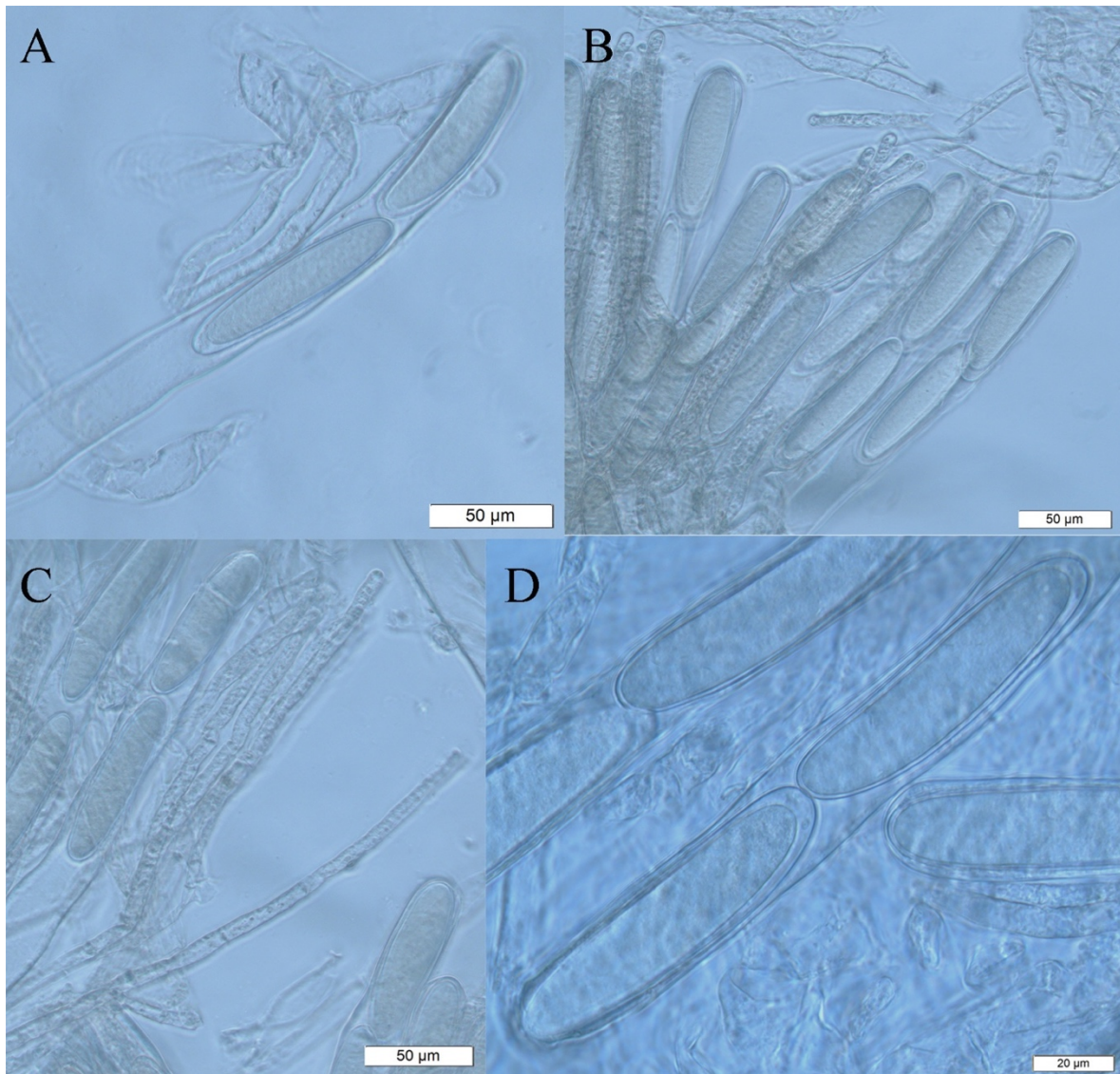
Supplemental figure 2. Phylogenetic tree based on *LSU* sequence region.

Note: Tree covered 157 sequences (contained 56 phylopecies of true morels, *Verpa* sp) were constructed by Maximum likelihood (ML) method. Bootstrap values 50% were shown on branches. Collections of *Morchella* spp. species, inclusive of a *Verpa bohemica* from Qinling mountain were marked with red dots were the putative Qinling linkage and four unidentified collections. Phylopecies were assigned according to Du et al. (2012a, 2012b); O'Dennet al. (2011) and Taskin et al. (2012).

Supplemental figure 3. Phylogenetic tree based on *ITS+LSU* sequence regions.

Note: Tree covered 156 sequences (contained 56 phylopecies of true morels, *Verpa* sp) were constructed by Maximum likelihood (ML) method. Bootstrap values $\geq 50\%$ were shown on branches. Collections of *Morchella* spp. species, inclusive of a *Verpa bohemica* from Qinling mountain were marked with red dots were the putative Qinling linkage and four unidentified collections. Phylopecies were assigned according to Du et al. (2012a, 2012b); O'Dennet al. (2011) and Taskin et al. (2012).

Supplemental figure 1. Morphology of *Verpa bohemica*



Supplemental figure 3. Phylogenetic tree based on *ITS+LSU* sequence regions

