

Response to Reviewer's Comments

Dear reviewer

Thank you very much for reviewing our manuscript and your affirmation to our study! Your careful review made our manuscript more accurate! Now, I have made corresponding revisions using the “Track Changes” function according to your comments, and your comments have been replied point by point as below.

Point 1

Location: 2.5 Phylogenetic analysis, paragraph 3, line 2

Comment: A citation is marked in yellow and I do not understand why. Please clarify.

Response: Thanks very much for your reminding. I sincerely apologize for this oversight. Highlighting the citations in yellow was done to facilitate my verification of each reference before submission. Unfortunately, I forgot to remove this marking after completing the verification process. I have removed the highlighting.

Point 2

Location: Figure 1

Comment: I suggest the author explain why some species have bold names.

Response: Thanks very much for your reminding. I'm sorry I missed this point. In the tree, our new isolates are in blue, and the type strains are in bold. I have added this information to the legend of figure 1.

Point 3

Location: 3.2.2 *Arthrobotrys heihuiensis*, paragraph 3, line 10

Comment: The explanation of “super cell” should be placed when the word first appears, so the explanation in 3.2.2 should be moved to 3.2.1

Response: Thanks very much for your correction! I apologize for my oversight. I have modified it.

Point 4

Location: Discussion, paragraph 1.

Comment: Are these 10 species exclusively found in freshwater habitats included among the 17 species found in freshwater? What is the phylogenetic relationship among these 10 species exclusively found in freshwater? Since this is a paper on description of new species I find it important to put these fungi in the wider view of the phylogeny and ecology of the group. It would be beneficial to discuss these questions in the Discussion section.

Response: Thanks very much for your comments! Yes, the 10 species exclusively found in freshwater listed in the manuscript are part of the 17 freshwater species. Based on the current information, there doesn't appear to be a clear connection between the phylogenetic relationships and their habitat types. In the phylogenetic

tree provided in this study, all species, except for the 10 exclusively found in freshwater mentioned in the manuscript have distribution records in terrestrial habitats. Additionally, many of the sub-clades have low support values, making it difficult to discuss the relationship between phylogenetic relationships and habitat types based on this study. In fact, among the 10 species listed in the manuscript, except for species *Arthrobotrys dianchiensis* the remaining 9 are newly described species published in the past three years. It cannot be ruled out that they may be discovered in terrestrial habitats in the future, so this paper does not discuss related content.

Point 5

Location: Full text.

Comment: The author needs to correct several language mistakes.

Response: Thank you so much for being so careful to point out these mistakes. I have now corrected them and checked the full manuscript again, and the errors we found also have been corrected. Thank you very much!