Main document changes and comments

Page 1: Commented [NJ1]	Nancy Johnson	10/21/2025 1:47:00 PM

This one is my favorite. Could you drop the word Plant and just say Fungal Endophytes because by definition, they are inside a plant?

Page 1: Commented [NJ2R1]	Nancy Johnson	10/21/2025 1:48:00 PM

Maybe say "Ubiquitous Plant Symbionts, Sparse Sampling: Global Patterns of Fungal Endophytes"

Page 1: Commented [CAG3R1]	Catherine A Gehring	10/22/2025 4:43:00 AM

i agree that plant is not needed and also like this title the best.

Page 1: Deleted	Nick	11/7/2025 1:04:00 PM

To our knowledge, t

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ever

Page 1: Commented [CAG4]	Catherine A Gehring	10/22/2025 10:57:00 AM

maybe say gaps instead of biases?

Page 1: Commented [NJ5]	Nancy Johnson	10/21/2025 1:07:00 PM

This is a fantastic abstract!

Page 1: Commented [CAG6R5]	Catherine A Gehring	10/22/2025 4:43:00 AM

I agree!!

Page 1: Commented [CAG7]	Catherine A Gehring	10/22/2025 4:45:00 AM

not really needed

Page 1: Commented [CAG8]	Catherine A Gehring	10/22/2025 10:50:00 AM

Because the paper is targeting a very general audience, what about mentioning the role of fungal endophytes as a source of pharmaceuticals as another reason they are important. There is a recent review in Symbiosis in 2023.

Page 1: Added	Nick	11/7/2025 1:19:00 PM

a common and

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notion

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claim

Page 1: Deleted	Nancy Johnson	10/21/2025 1:08:00 PM

a

Page 1: Added	Catherine A Gehring	10/22/2025 10:52:00 AM

However,

Page 1: Added	Nick	11/7/2025 1:19:00 PM

this assumption remains unvalidated, as

Page 1: Added	Catherine A Gehring	10/22/2025 10:52:00 AM

a comprehensive, systematic evaluation of fungal endophyte distribution across plant taxa and regions is lacking.

Page 1: Commented [CAG9]	Catherine A Gehring	10/22/2025 4:46:00 AM

to keep with the tense you have been using

Page 2: Deleted	Catherine A Gehring	10/22/2025 10:53:00 AM

Despite this apparent universality, a comprehensive, systematic evaluation of fungal endophyte distribution across plant taxa and regions has been lacking

Page 2: Commented [NJ10]	Nancy Johnson	10/21/2025 1:12:00 PM

I would stick with the term "ubiquity" just for consistency

Page 2: Commented [CAG11R10]	Catherine A Gehring	10/22/2025 4:44:00 AM

I agree!

Page 2: Commented [CAG12] — Catherine A Gehring — 10/22/2025 4:46:00 AM

to keep with the tense you have been using

Page 2: Added — Catherine A Gehring — 10/22/2025 10:53:00 AM

DELETE THIS:

Page 2: Commented [CAG13] — Catherine A Gehring — 10/22/2025 4:48:00 AM

I don't see methodological variation as a knowledge gap and wonder if this should be rephrased or omitted. Let me see what I think as I continue reading.

Page 2: Added — Catherine A Gehring — 10/22/2025 10:53:00 AM

MOVE THIS TO RESULTS (rest of paragraph)

Page 2: Deleted — Catherine A Gehring — 10/22/2025 4:49:00 AM

global

Page 2: Commented [NJ14] — Nancy Johnson — 10/21/2025 1:18:00 PM

Should this be in Results and not in the Intro?

Page 2: Commented [CAG15] — Catherine A Gehring — 10/22/2025 4:58:00 AM

i think this paragraph seems like it is your results and i wonder about moving the whole thing down except for the topic sentence which could be modified slightly to be the ending sentence of the first paragraph. Then you could go to paragraph 3 about what you have done and move the second paragraph to the results section.

Page 2: Commented [CAG16R15] — Catherine A Gehring — 10/22/2025 10:54:00 AM

I made suggestions towards that end in the text.

Page 2: Added — Catherine A Gehring — 10/22/2025 11:01:00 AM

MOVE THIS after paragraph 1.

Page 2: Added — Catherine A Gehring — 10/22/2025 11:01:00 AM

the

Page 2: Commented [CAG17] — Catherine A Gehring — 10/22/2025 4:53:00 AM

readers might wonder why this is different than the number presented in the abstract. i can guess why but it might still be important to make this clear in the paper.

Page 2: Commented [CAG18]   Catherine A Gehring   10/25/2025 9:18:00 AM

will you have more methods to describe how these abstracts were selected and what time span they represent?

Page 2: Commented [N19]   Nick   11/7/2025 1:20:00 PM

I might reword this to "Here, we classify over 21,000 abstracts from the fungal endophyte literation using a machine learning pipeline."

Page 2: Deleted   Catherine A Gehring   10/22/2025 11:04:00 AM

quantify detection versus assumption,

Page 2: Added   Catherine A Gehring   10/22/2025 11:02:00 AM

patterns and gaps

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biases

Page 2: Added   Catherine A Gehring   10/22/2025 11:02:00 AM

explore the effects of detection methods on presence/absence classifications

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true

Page 2: Added   Catherine A Gehring   10/22/2025 11:04:00 AM

designations

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s

Page 2: Commented [NJ20]   Nancy Johnson   10/21/2025 1:14:00 PM

"ubiquity paradigm"?

Page 2: Commented [CAG21R20]   Catherine A Gehring   10/22/2025 4:51:00 AM

i agree with this.

Page 2: Commented [CAG22]   Catherine A Gehring   10/22/2025 10:57:00 AM

Is there a distinction you want to make between biased and incomplete? I think of biased as having an intent and am wondering if that is what you mean?

Page 2: Commented [CAG23] **Catherine A Gehring** **10/22/2025 5:00:00 AM**

I kjnow i consistently complain about colors (sorry) but the black on red is difficult. I like red as a warning color for the work that needs to be done which is huge - maybe yellow instead?

Page 2: Commented [CAG24R23] **Catherine A Gehring** **10/22/2025 11:17:00 AM**

Also, I could be said to study plants but I am having trouble conjuring up an image for some of these Phyla and I think the broad readership of Nature will as well. The one that had the best representation (most blue) is described as a group of fossil primitive plants in Wikipedia. Two suggestions

1. put some sort of common name or picture below or next to the phylum name.

2. list the approximate number of species seen in the group (or something similar).

Page 2: Commented [CAG25R23] **Catherine A Gehring** **10/22/2025 5:07:00 PM**

The point of the second comment is that some groups are likely small and low coverage is less surprising than the large group in which many plants fit.

Page 3: Commented [N26] **Nick** **11/7/2025 1:08:00 PM**

I like this figure, in that it effectively illustrates how poorly sampled this question is. I think it works well as is, but the font size should be larger, as it s difficult to read at page size and doesn t need to be. Consider putting the legend at the top or bottom so it doesn t take up so much space.

Page 3: Commented [NJ27] **Nancy Johnson** **10/21/2025 1:15:00 PM**

Define GBIF in Figure 1

Page 3: Commented [NJ28R27] **Nancy Johnson** **10/21/2025 1:17:00 PM**

If this is part of the analysis that you conducted for the study, shouldn't it be moved into the Results section and not in the Introduction?

Page 3: Deleted **Catherine A Gehring** **10/25/2025 9:19:00 AM**

plant phylum

Page 3: Commented [NJ29] **Nancy Johnson** **10/21/2025 1:20:00 PM**

Clarify that by representation you mean presence in the endophyte literature.

Page 3: Commented [NJ30R29] **Nancy Johnson** **10/21/2025 1:21:00 PM**

Shouldn't Figure 1 be in this section?

| Page 3: Commented [CAG31] | Catherine A Gehring | 10/22/2025 5:09:00 PM |

consider elaborating on this by saying something like...for example, maize has been examined for root, leaf and stem endophytes in X studies while only two studies have examined endophytes of X.

| Page 3: Commented [CAG32] | Catherine A Gehring | 10/25/2025 9:21:00 AM |

i would combine these results into a single section to reduce the number of subheadings.

| Page 3: Commented [CAG33] | Catherine A Gehring | 10/22/2025 5:10:00 PM |

maybe focus on plant biodiversity hot spots if that is possible to pull out of your data?

| Page 3: Commented [CAG34] | Catherine A Gehring | 10/25/2025 9:30:00 AM |

i am a little confused by the map. Brazil looks pretty dark in color yet you say in the text that it only constitutes 3%. Is it logarithimic? Does it have to be? I think using percentages in the text if the map is logarithmic is going to create some confusion. Also, does gray mean no studies? It is not really shown on the scale.

| Page 4: Commented [NJ35] | Nancy Johnson | 10/21/2025 1:40:00 PM |

Did you check out Table 2 in Matt Lau's 2013 paper? He didn't find endophytes in *Elaeagnus angustifolia, Forestiera mexicana, or Prosopis*

glandulosa

| Page 4: Commented [CAG36] | Catherine A Gehring | 10/22/2025 5:11:00 PM |

I think you will need to describe what you mean by manual validation somewhere in here.

| Page 4: Commented [NJ37] | Nancy Johnson | 10/21/2025 1:26:00 PM |

Ubiquity?

| Page 4: Commented [NJ38] | Nancy Johnson | 10/21/2025 1:27:00 PM |

ubiquity?

| Page 4: Commented [NJ39] | Nancy Johnson | 10/21/2025 1:27:00 PM |

ubiquity?

| Page 4: Commented [CAG40] | Catherine A Gehring | 10/25/2025 9:36:00 AM |

how important do you think this point is to make (that folks claim universality/ubiquity) when it is not really that common to state that in your selected abstracts? I wonder about spending more time on other aspects of the paper like areas of concentration of sampling in terms of plant taxa or plant organ?

Page 4: Commented [N41]	Nick	11/7/2025 1:13:00 PM

It s not critical for this study but I object to Mercator projection maps on principle. A more equal area projection (I like Robinson) would also better highlight that the low-latitude areas are underrepresented.

Page 4: Commented [N42R41]	Nick	11/7/2025 1:15:00 PM

I also might adjust the ticks to fall at typical breaks (10,100,1000) unless 22 and 464 have some particular singificance

Page 5: Commented [N43]	Nick	11/7/2025 1:12:00 PM

I m not sure this bar chart adds a lot to the map. If you want to keep it, I think it could be much smaller if you made it horizontal and immediately below the map.

Page 5: Commented [CAG44]	Catherine A Gehring	10/25/2025 9:42:00 AM

never mind re. my comment about what grey is. Are any of the countries with no records places of high or unique biodiversity. You might be able to use the recent SPUN Nature paper to help you with that.

Page 5: Commented [CAG45]	Catherine A Gehring	10/25/2025 9:45:00 AM

you mention Europe in the abstract but it is not so easily seen on the map. Not sure if that needs a change, just an observation.

Page 5: Commented [NJ46]	Nancy Johnson	10/21/2025 1:28:00 PM

ubiquity

Page 5: Commented [N47]	Nick	11/7/2025 1:16:00 PM

Would it be worth highlighting the tropics in particular here?

Page 5: Commented [CAG48]	Catherine A Gehring	10/25/2025 10:22:00 AM

Give an example here, potentially of animportant plant lineage that has not been sampled well?

Page 6: Commented [NJ49]	Nancy Johnson	10/21/2025 1:29:00 PM

This is brilliant!

Page 6: Commented [CAG50R49]	Catherine A Gehring	10/25/2025 10:19:00 AM

i agree!

| Page 6: Commented [CAG51] | Catherine A Gehring | 10/25/2025 10:19:00 AM |

This will be a fabulous resource!

| Page 6: Commented [CAG52] | Catherine A Gehring | 10/25/2025 10:25:00 AM |

i agree with this but I am not sure the point is made for this earlier in the ms using the data you have collected.

| Page 6: Commented [CAG53] | Catherine A Gehring | 10/25/2025 10:24:00 AM |

I love this wording but I think it is a little redundant with points already mentioned.

| Page 7: Commented [N54] | Nick | 11/7/2025 1:22:00 PM |

| Page 7: Commented [N55] | Nick | 11/7/2025 1:22:00 PM |

I m not familiar with PRISMA, but I think it would be more intuitive if the circles areas were proportional in size to the number abstracts.

| Page 7: Commented [CAG56] | Catherine A Gehring | 10/25/2025 9:48:00 AM |

what is considered complete metadata?

| Page 8: Commented [N57] | Nick | 11/7/2025 1:24:00 PM |

Define at first use

| Page 8: Commented [N58] | Nick | 11/7/2025 1:24:00 PM |

Probably good to define these terms for a general audience

| Page 8: Added | Nancy Johnson | 10/21/2025 1:31:00 PM |

Global Biodiversity Information Facility (

| Page 8: Added | Nancy Johnson | 10/21/2025 1:32:00 PM |

)

| Page 8: Commented [CAG59] | Catherine A Gehring | 10/25/2025 10:18:00 AM |

I am not sure what the accuracy number means here.

| Page 8: Commented [CAG60] | Catherine A Gehring | 10/25/2025 10:28:00 AM |

cite this?

downstream

Wouldn t a single genuine natural absence invalidate the claims of ubiquity?

Shouldn t you cite the GBIF website? https://www.gbif.org/

I think this might be useful in the main text as a figure to help motivate the study.

i like these charts (horizontal bar) better than the line charts or vertical bar charts. I think they are easier to look at.

Header and footer changes

Text Box changes

Header and footer text box changes

Footnote changes

Endnote changes