

No.



Pathologist's Branch,

Melbourne, 22nd March 1897

Dear Sir,

I have to thank you very much for sending me your Essay on "The Fungi that are likely to be discovered in future according to the Law of Analogy." It has come at a very opportune time as I was preparing a paper for the Linnean Society on the Genera of Australian Fungi & will now adopt your Carpological arrangement. At the same time I will take the opportunity of giving a brief summary of your views, as I consider that the Essay marks an epoch in the systematic classification of Fungi. Just as the numbers expressing the atomic weights form a natural basis for the systematic arrangement of the elements & their compounds in Chemistry so in Fungi the Spore may be regarded as the ultimate & fundamental unit.

I have attempted to arrange the Australian genera in the different divisions according to your systems but find difficulties in several of the groups. At the close of your Essay you remarks

"In the groups where the character of the spores is more uniform, as in the Gastromycetes, Discomycetes, Myxomycetes &c. the analogies are more difficult to detect & therefore it is more difficult to establish the parallelism of the types. I hope to touch on this question in future in order to show the analogies Table also in the other groups." This would be a most useful work & as you may have already sketched your scheme for the other groups, I take the liberty of sending you copies of the Tables which I have drawn out; so that perhaps you might give me the benefit of your advice, which would be freely acknowledged. In some of the genera of the Gastromycetes, I can find no record of spores & their colour & even in the Polyporaceae - Polyporus, Fomes, Polystictus &c. there are colourless & coloured spores, but they are unrecorded in a number of species. Again in the Hyphomycetes there are a number of genera, such as Oospora, Botrytis &c. which have colourless & colored spores, where it will be necessary to duplicate the names, & wherever you consider new generic names necessary, I would be pleased if you would sanction them with your authority, for it is most important to have symmetry of naming, such as you are specially fitted to do. Without further preliminary I will just add a few remarks on each Division —

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7. Agaricaceae — To harmonize with your naming
I proposed Hyalosporae for Leucosporae

2. Polyporaceae, Hydnaceae, Sheleporaceae,
Clavariaceae, & Tremellaceae —

In Polyporus, Tomes, Polystictus, Merulius & Hydnum, I
mark by an * that the spores are sometimes colored,
then in Hymenoschaste, Stereum & Craterellus & Clavaria
I consider the distinction might be marked by new
genera

3. Gastromycetes — Here our knowledge is very imperfect &
if classified at all on this basis, many of the genera
would require a mark of interrogation after them.

4. Uredines — Taking the highest form of spore known
they are arranged as in Table.

5. Pyrenomyces — I have mainly followed your
Table but have a few questions to ask.

~~1. To Melogramma, entirely replaced by Calamita.~~

1. To Platycheilus, Cooke, the same as Glonopsis, D.M.?

(P. caespitosus) ^{cf. Lyl. IX p. 1117}
2. To Dimersporium (Hyalodidyma) & Dimersporium (Phaeodidyma)
not to be distinguished by a different name such
as Dimersporiella?

3. To Sarcosyphon, Cooke not adopted? IX p. 568

4. Have any place been found for Rhizoctonia?

5. P. Farlowiella subsp. futes for Farlowia? ^{IX, 1100 II p. 88}
I believe I have found a genus (Asteridiella) for
your N° 257, but I will send paper with description

shortly, when you can judge for yourself.

6. Discomycetes — According to Masseri Col. IV of "British Fungus-Flora" many of these genera are continuous & uniseptate, such as Ciboria, Chlorosplenium, Tapesia &c. but as all the Australian species are continuous, I leave it to you in your general review to make provision for uniseptate species if necessary.

7. Tuberoides — I am not aware that the Spores of Endogone have been described.

8. Hypomyces — I have had great difficulty in classifying this Division, because while there is often a clear distinction into coloured & uncoloured spores, no evidence of this is given in the generic naming. I trust you may be able to supply the deficiency where I have placed interrogation marks. (c)

9. Saccharomycetes — I do not know if Saccharomyces would lend itself to Classification.

10. Ustilaginies — Are all Phaeosporae.

11. Phycomycetes — A few genera are both hyaline & coloured, such as Pilobolus, Mucor, Circinella & Protomyces.

12. Myxomycetes — I have followed Lister's Mycetozoa & have attempted to classify them on similar lines to the Agarics adding Violet-spored (Lozporae) Olive-spored (Clauosporae)

& Brown-spored (Phaeosporae). Of course I have chosen the prevailing colour, since even in Agarics (Pezizula &c.) there are variations.

13. Sphaeropsides — They readily follow the Pyrenomycetes in the coloration & septation of the spores.

It is simply in the hope that you are already engaged in elaborating your great scheme that I have written thus at length, so that I may make it generally known to English-speaking people.

Yours sincerely
J. McAlpine