

## ***Interactive comment on “Speculations on the application of foliar $^{13}\text{C}$ discrimination to reveal groundwater dependency of vegetation, provide estimates of root depth and rates of groundwater use” by Rizwana Rumman et al.***

**Rizwana Rumman et al.**

derek.eamus@uts.edu.au

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We would like to thank Dr Macinnis-Ng for taking the time to comment on our speculative paper. We thank her for her kind comments about the "fascinating study" and "valuable contribution".

We believe that the lack of a broken stick relationship in Fig 7 arises because in Fig 3, there is seasonal variation in  $^{13}\text{C}$  and in Fig 6 there is no seasonal variation in LVD (nor depth-to-groundwater in either figure). Consequently when we plot the annual

C1

mean  $^{13}\text{C}$  against the corresponding LVD the variation in  $^{13}\text{C}$  results in an inability to identify a significant broken stick relationship in Fig 7. A linear relationship in Fig 7 was the best significant fit to the data.

We thank Dr Macinnis-Ng for the suggestion to explain the meaning of the symbols in Eq 1, 2 and we shall make the changes in the final version of the Ms. We shall also explain that wet and dry seasons correspond to April and Sept sampling periods, in the revised Ms. We don't believe the red bars preclude the value of Fig 1 as daily values of VPD or temp are not of material value to the Ms, only the seasonal trends.

Once again we thank Dr Macinnis-Ng for her helpful and supportive comments.

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C2