

**'Water-Use Dynamics of an Alien Invaded Riparian Forest within Summer Rainfall Zone of South Africa', Editor technical corrections, 21 January 2019**

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The editor, Prof. Dominic Mazvimavi, is thanked for his time, continued effort and comments provided throughout the development of this manuscript. The authors greatly appreciate his contributions. The details of the technical corrections are provided below (indicated in bold and italicised text):

1. **Page 1, line 1:** *The* taken out of title
2. **Page 1, line 33:** The *total accumulated* sap flow per year for the three *individual* *A. mearnsii* and *E. grandis* trees was 6 548 and 7 405 L·a<sup>-1</sup> respectively
3. **Page 1, line 36:** After spatial up-scaling, it was concluded that, at the current state of invasion (***21 % of the stand being alien species***), the stand used 40 % more water per unit area than if the stand were in a pristine state.
4. **Page 2, line 3:** ***Ten million hectares of South Africa has been invaded by 180 alien species, which is over 8 percent of the country's total area*** (van Wilgen *et al.*, 2001). The majority of this invasion extent is within riparian areas that have readily available water and are difficult to manage (Working for Water, 2011).
5. **Page 2, line 8:** Can be *demonstrated*.
6. **Page 2, line 17:** Little research has been undertaken on the riparian area ***where the availability of water to trees is often not limited*** (except in severe drought conditions).
7. **Page 2, line 40:** In the high rainfall areas of South Africa, invasive alien plants growing in riparian areas (***5 726 km<sup>2</sup>***) are estimated to reduce annual streamflow by 523 x 10<sup>6</sup> m<sup>3</sup> with a predicted annual reduction estimated to be as high as 1 314 x 10<sup>6</sup> m<sup>3</sup> if allowed to reach a fully invaded state (Cullis *et al.*, 2007).
8. **Page 3, line 6:** This gap *in* knowledge has led to uncertainty and contention over riparian restoration and rehabilitation techniques.
9. **Page 3, line 19:** An overview of the study site, sampling design and equipment *used* to carry out the study has been provided in this Section.
10. **Page 3, line 29:** This forest type *when* in a pristine state...
11. **Page 3, line 31:** Mistbelt forest is a species rich, multi-layered ***and has*** a dense...
12. **Page 3, line 38:** Eastern Mistbelt forests can be characterised ***as*** cool, tall inland forests
13. **Page 3, line 41:** red a-pedal soils on the midslope, and soils
14. **Page 3, line 44:** Approximately 80% of the precipitation occurs in the summer months (***October to March***)...
15. **Page 3, line 47:** The long-term mean annual precipitation is between 941 and 1000 mm·a<sup>-1</sup>
16. **Page 3, line 49:** with the highest air temperatures occurring on the *north*-facing slopes

17. **Page 4, line 2:** Strong berg (westerly) winds are prevalent during August to September and play a significant role in the spread of fires
18. **Page 4, line 31:** The findings indicated that in the riparian forest, there was a density of 1 632 stems·ha<sup>-1</sup> *of* invasive species
19. **Page 4, line 38:** Rainfall using a tipping bucket rain gauge (TE525, Texas Electronics Inc., Dallas, Texas, USA). *Reference moved to the end of the sentence.*
20. **Page 5, line 7:** and *to* allow for
21. **Page 6, line 10:** Qstand. *Described in previous sentence as the stand water flux.*
22. **Page 6, line 41:** The seasonal distribution of rainfall is important as it is during these periods of water scarcity *when* the vegetative water-use becomes significant.
23. **Page 7, line 8:** This was attributed to fewer daylight hours and less heat units during the winter months *than in the summer months* resulting in
24. **Page 7, line 22:** *With regards to the understorey, the* water-use of the...
25. **Page 8, line 47:** *Due to the prevalence of severe droughts in this area,* these results are more likely to provide substance to land managers and decision makers, indicating the hydrological benefit of restoration and rehabilitation activities. *Sentence reworded to avoid reference to recent drought.*
26. **Page 17, line 5:** *Added - N/A indicates that the measurement parameter was 'not applicable' for the technique used.*
27. **Page 20, line 5:** Figure 6. *Daily sap flow (dotted line) and accumulated sap flow (dashed line)* averaged over two years (2013 & 2014) from an indigenous *S. pyroides* (a), *C. africana* (b), *G. buxifolia* (c) and an introduced *A. mearnsii* (d) at New Forest.
28. **Page 21, line 1:** *Figure 7 legend changed to italics*
29. **Page 22, line 2:** Table 2 - Annual Accumulated Sap Flow (L·a<sup>-1</sup>)
30. **Page 23:** *Figure 8 and 9, rainfall bar chart changed to blue and made more prominent*