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Gender dimorphism in Corema album across its biogeographical area and implications under a scenario of extreme drought events

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Highlights

- *Corema album* populations respond to the climatic gradient of the species' biogeographical area.
- Gender dimorphism is only recognized in $\Delta^{13}C$ and in leaf water potential in the dry season.
- Female plants have lower integrated water use efficiencies to maintain fruit production.
- Leaf water potential is more negative in male plants (September in southern populations).
- Females might have deeper roots than males as a compensatory mechanism, presenting underground SSS.

Abstract

In dioecious species, traits may have evolved because of significantly different resource demands associated with male versus female sexual reproduction. It is generally assumed that females have higher reproductive costs, thereafter in long-lived species, males often exceed females in vigour and suffer lower physiological limitations under