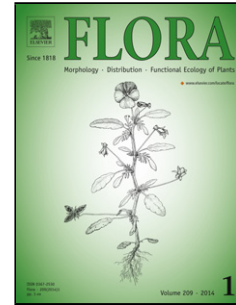


## Accepted Manuscript

Title: Morphological effects at radicle level by direct contact of invasive *Acacia dealbata* Link

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1 **Morphological effects at radicle level by direct contact of invasive *Acacia dealbata***

2 **Link**

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7 **Highlights**

- 8 • [We examined morphological alteration in target radicles caused by \*Acacia dealbata\*.](#)
- 9 • [The leaves, pods and seeds inhibited the formation of root hairs in target seedlings.](#)
- 10 • [The rhizodermis, parenchyma and vascular tissue of target roots were altered.](#)
- 11 • [Significant changes and damage were observed in the root cap of target radicles.](#)
- 12 • [Morphological alterations in radicles compromised the survival of affected seedlings.](#)

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14 **ABSTRACT**

15 Seeds of *Lactuca sativa* L. (model plant) and *Quillaja saponaria* Mol. (native tree) were  
16 subjected to germination in direct contact with leaves, pods and seeds from invasive *Acacia*  
17 *dealbata* Link. (Fabaceae) to reveal whether morphological changes occur at radicle level.  
18 Bioassays were carried out with plant material deposited underneath *A. dealbata*'s canopy  
19 under natural conditions at Mediterranean ecosystem in South America. Segments of  
20 radicle tip, cell elongation zone and root hair zone were analyzed under Scanning Electron  
21 Microscopy. The three plant parts from *A. dealbata* inhibited the formation of root hairs  
22 and altered the rhizodermis (deformation and tissue destruction) of the two recipient  
23 species. In the case of *Q. saponaria*, an increase in thickness in the cell elongation zone

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