Effect of a native tree on seedling establishment of two exotic invasive species in a semiarid ecosystem

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Theory predicts that in more stressful environments, positive plant-plant interactions should be more important than negative ones. For instance, in arid and semiarid regions, amelioration of soil drought produced by the shade of established plants could facilitate establishment of other species, in spite of light reduction. However, this theory has not been tested widely in the context of plant invasion. In this paper we evaluated the hypothesis that in a semiarid ecosystem of central Chile, the native tree, Lithreacaustica, should facilitate through positive shading effects, the seedling establishment of two widely planted and invasive forestry species, Pinusradiata and Eucalyptusglobulus. We assessed the seedling establishment examining two processes: seedling recruitment (including germination) and subsequent seedling survival. We sowed seeds (to assess recruitment) and planted 8 months old seedlings (to assess seedling survival) of each exotic species under Lithrea patches, open s