Assessing the effects of native plants on the pollination of an exotic herb, the blueweed Echium vulgare (Boraginaceae)

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The impacts of exotic plants on the pollination and reproductive success of natives have been widely reported; however, in spite of its importance for the invasive process, the role of native plants in the pollination and reproduction of exotic plants has been less explored. To fill this gap, we compared the patterns of pollination and reproductive success in the invasive herb Echium vulgare (Boraginaceae) between monospecific patches (only E. vulgare) and mixed patches (sympatry with native herbs Schizanthus hookeri and Stachys albicaulis) in central Chile. Using sample quadrats of 1 m × 2 m, we quantified the richness, diversity and visitation rate of flower visitors in 15-min observation intervals. We conducted an assay to assess the effect of the patch types (monospecific and mixed) and the isolation of flowers to visitors on both the fruit set and seed/ovule ratio. We showed that native plants favoured the richness of visitors of E. vulgare; however, they did not lead to increases