

# Woody plant invasions and restoration in forests of island ecosystems: lessons from Robinson Crusoe Island, Chile

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**Abstract** Islands are susceptible to exotic plant invasion, and Robinson Crusoe Island (RCI), Juan Fernandez Archipelago (33°S, 78°7'W, Chile) is no exception. Through a literature review, we assessed plant invasion and compared it to other oceanic islands worldwide. Here, we discuss measures to enhance forest recovery on RCI based on knowledge accumulated from studies on RCI and other islands. Although these findings are designed to halt the progress of invasion on RCI, they could also be applied to other insular ecosystems. We addressed the following questions: (1) What is the plant invasion status on RCI in relation to other islands worldwide? (2) How imminent is biodiversity loss by plant invasion on RCI? (3) How is woody plant invasion taking place on RCI? (4) What methods are effective in controlling invasive woody species on islands worldwide? (5) What is the ability of natural forests to recover after controlling invasive plants on RCI? We found that (1) RCI is globally the fourth most invaded island for woody species. (2) Invasive woody species expansion is estimated at 4.3 ha annually. (3) Some invasive species establish under forest canopy gaps, out-competing native species. (4) Control of invasive plant species

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This article belongs to the Topical Collection: Invasive species.

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