

The decline of an endangered temperate ecosystem: The ruil (*Nothofagus alessandrii*) forest in central Chile

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We describe the current state of the ruil (*Nothofagus alessandrii*) forest, a rare and endemic temperate forest in central Chile. Because of a long history of land-use, the ruil forest has suffered intense deforestation and fragmentation. By 1991, there remained 352.2 ha of forest in 183 fragments, most of them small and regular and a few large and irregular. From 1981 to 1991 the forest disappeared at a rate of 8.15% per year; to our knowledge, the highest value reported in forest fragmentation. Fragments are surrounded by a matrix of *Pinus radiata* plantations. Only 42 ha of forest (12% of the total area) are protected in a public reserve. An analysis of the composition of the forest shows that 13.8% of the total species are introduced. *Pinus radiata* is the only tree that has invaded this forest successfully. The 45.4% of native tree species are shade-tolerant and dependent on biotic pollinators and dispersers. These species should be the targets for future conservation efforts as they