

## **Natural regeneration dynamic of mixed *Nothofagus* forests in southern Patagonia: influence of canopy composition and landscape**

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Species composition of tree recruitment in mixed forests is a determining factor related to the canopy structure. This work determines if the mixed forests of *Nothofagus pumilio* and *N. betuloides* present transitions towards forest types with the dominance of one of these species or are a stable system, by the analyses of its natural regeneration dynamics. Three forest types were selected (pure *N. pumilio*, pure *N. betuloides* and mixed stands) in two contrasting landscapes (coast and mountain) in Tierra del Fuego, Argentina. Forest structure and microclimate (air temperature, soil moisture) were evaluated for each stand (n=12), while seed production and natural tree regeneration were monitored annually (2014-2019). Data were analysed with ANOVAs, general linear models and multivariate techniques. Seedling recruitment of *N. pumilio* and *N. betuloides* was proportional to seed production with significant inter-annual variability. *Nothofagus pumilio* was more successful than *N. betuloides* in seedlings recruitment in every forest type and landscape. Forest structure and microclimate also played important roles in the dynamics of mixed *Nothofagus* forests. Multivariate analyses revealed a stronger effect of the landscape rather than canopy composition. Our results show a tendency in mixed *Nothofagus* forests towards a transition to pure *N. pumilio* forests, mainly due to greater success in its regeneration strategy.